ALABAMA WATER SCIENCE CENTER

FLOOD PLAN

INTERNAL DRAFT DOCUMENT

FEBRUARY 17, 2006

CONTENTS

Acronyms and abbreviations:

ADCP	Acoustic Doppler Current Profiler
DOT	Department of Transportation
FCC	Federal Calling Card
FEMA	Federal Emergency Management Agency
GH	Gage height
GSA	General Services Administration
NOAA	National Oceanic and Atmospheric Administration
Q	Discharge
SW	Surface water
TVA	Tennessee Valley Authority
TWRI	Techniques of Water Resources Investigations
USGS	U.S. Geological Survey
WRD	Water Resources Division

ALABAMA WATER SCIENCE CENTER FLOOD PLAN -- INTERNAL DRAFT DOCUMENT

INTRODUCTION

The purpose of this flood plan is to outline and record advance planning for flood emergencies, so that all personnel will know the general plan and have a ready-reference for necessary information. This will ensure that during any flood event, regardless of the extent or magnitude, the resources of the U.S. Geological Survey (USGS), Alabama Water Science Center (WSC) can be mobilized into a maximum data collection operation with a minimum of effort.

Water Science Center streamflow gaging station operations generally are conducted from two offices: the WSC Office in Montgomery and the Field Office in Tuscaloosa. The following persons are designated as flood activity coordinators for these offices: **Montgomery, Rick Treece; Tuscaloosa, Victor E. Stricklin**. During localized or routine flood events, field personnel assignments will be made independently by the WCS or Field Office Coordinator. When flood activities require the presence of these persons in the field, personnel assignments will be made by the **alternate WCS Flood Coordinator, T.S. Hedgecock**. If WSC or field office personnel cannot adequately monitor a flood, the WSC Flood Coordinator assigns additional support personnel, as outlined in this plan or as modified for the existing situation.

The flood plan will be updated as required due to changes in personnel, site conditions, and by additional data acquisition.

FLOOD PERSONNEL

The flood personnel assignments and individual duties are described in **Appendix 1 and 2** of this WSC Flood Plan.

COMMUNICATIONS

During flood emergencies, good communication is very important and the cell phone and 2-way radio will be the primary means of communication. Field personnel will frequently place long-distance calls, and cellular phones will be used whenever possible. Each vehicle should be equipped with a cellular phone that has been assigned to a specific individual or checked out from the office pool. All WSC personnel have either a 2-way radio/cell phone combined unit or separate radio and cell phone. Field personnel will use these units as cellular coverage permits. In more remote areas of the state, field personnel will have to rely more on land line telephones. Additionally, each person has a Federal Calling Card (FCC) with user instructions printed on the back. The FCC will be used to place FTS 2000 off-net calls. FCC user instructions are included in **Appendix 2**, which also contains a list of telephone numbers to assist in maintaining good communications during flood emergencies. The list includes numbers for Alabama WSC personnel, cellular phones, streamflow stations and for the following offices: Water Science Centers, National Oceanic and Atmospheric Administration (NOAA), Alabama Power Company, U.S. Army Corps of Engineers, and Tennessee Valley Authority (TVA).

Flood personnel will contact the Flood Coordinator upon completion of assignments and give the following information for each station visited:

- gage height
- time
- rate of change of stage
- Q measurement information (GH and Q, if computed)
- time of peak (if applicable)
- weather and road conditions
- other significant information

A WSC form, AL- 1 (see **Appendix 2**), has been prepared to assist in the compilation of this information. Field personnel will make additional telephone contacts at any time actual field conditions are found to be significantly different from expectations.

Communications with adjacent WRD WSC's and with other Federal, State, and municipal agencies will generally be made by the Flood Coordinator. For extraordinary floods, requests for additional personnel and equipment will be made by the WSC Director.

Liaison with Division and Regional Headquarters is the responsibility of the WSC Surface-Water Specialist or other appropriate WSC personnel. Communications will follow the instructions in WRD Memorandum 90.22 (dated August 25, 1992) and the updated Project Alert section of this document included in **Appendix 2**.

EQUIPMENT

A complete set of flood-measuring equipment will be maintained for each regularly assigned vehicle. Sets of emergency equipment will also be maintained for use during extreme flood events when other vehicles must be obtained. Additional vehicles can be obtained on dispatch from the General Services Administration (GSA) Motor Pool or from commercial rental companies if the GSA is unable to meet our needs.

An adequate supply of sediment samplers and bottles will be maintained for use during extreme flood events. Sediment samplers available in the WSC are of two categories: (1) suspended and (2) bed material. The DH-59 and DH-76 suspended-sediment samplers are the ones routinely used to obtain depth-integrated sediment samples at miscellaneous sites and streamflow gaging stations, as assigned. Other types of suspended-sediment samplers, P-61 and D-49, are assigned to field parties with specific event sampling assignments as indicated by the footnotes to "**Flood Personnel**" in **Appendix 1**. Bed material samplers, BM-54 and BMH-60, are also assigned to field parties with specific event sampling assignments as indicated in **Appendix 1**. Bed material samples generally will **not** be taken during flood events, but, if required, will be at the direction of the Data Section Chief through the Flood Coordinator.

Individual responsibilities of the flood personnel for equipment maintenance are delegated in the "Duties" section of **Appendix 1**.

DATA NEEDS

A complete list of sites where flood data are collected and the data needs for each site are listed in **Appendix 3**. Each site is assigned a priority based on data needs and the hydrologic characteristics of the site.

PROCEDURES

The procedures as outlined in Techniques of Water-Resources Investigations (TWRI) manuals and Water-Supply Paper 2175, *Measurement and Computation of Streamflow: Volume 1. Measurement of Stage and Discharge* will be followed in collecting streamflow data during floods. Each field person should be familiar with **Appendix 4**, which contains information concerning special problems encountered in conventional current-meter measurements and procedures to follow when obtaining miscellaneous or periodic sediment samples at regular streamflow stations during floods. When practical, field personnel will take or obtain photographs showing unusual flood conditions.

AERIAL PHOTOGRAPHS

Federal Emergency Management Agency (FEMA) flood maps and other maps, such as USGS flood prone and topographic maps will be used to delineate segments of streams where aerial photographs are desired during, or immediately following, extensive floods. These maps will be utilized for planning and executing photography flights.

POST-FLOOD OPERATIONS

Data obtained during the flood will be evaluated to determine what data needs were met and what new needs have arisen. This will be done quickly so that follow-up measurements can be made where necessary. Crest stages will be examined to determine sites where indirect measurements should be made, and marking of high-water marks for indirect measurements can be done. Upon completion of follow-up operations, the listing of data needs will be examined and priorities will be reassigned where necessary.

The Flood Coordinator will debrief field personnel to obtain qualitative information such as location of inundated roads, observed damage, and photographs.

SAFETY

Job safety is just as important during flood events as it is during routine field operations, however there is likely to be more potential for the occurrence of dangerous situations during flood events. These situations may include any or all of the following conditions: swollen streams with swift velocities; turbulent flow; heavy debris; poor visibility; inclement weather; darkness; heavy traffic; wet, slippery roads; or even damaged road surfaces and bridge structures. The personal protective equipment and safety supplies provided to everyone, and safety equipment placed in vehicles for routine data collection activities will generally be sufficient for operations during flood events. The objective of field operations during and following flood events is to safely collect hydrologic data in order to document certain occurrences related to individual flood events. These occurrences include the following: gage height and stream-discharge relation, including peaks; gage height and sediment-discharge relations; and chemical-quality of floodwaters at specific times. During flood events, data will be obtained by flood parties as assigned.

Flood Parties

Generally, though not always, a flood party will consist of two or more persons. The additional person(s) will provide necessary assistance required for field operations during floods, including improved measures of safety.

Communications

During flood operations the level of communication between the field and office will increase significantly due to the nature of the activity. In addition to communication dictated by daily activities, each flood party is required to communicate with the flood coordinator or his designate at the end of each workday. The contact can be as late as arrival at the motel, office, or home, but should be no earlier than the completion of work at the last site. Concerning this requirement, the flood party and flood coordinator, by mutual agreement, can make other arrangements during the course of daily activities. To assist with the increased level of communication, radio and cellular phones are available. Cellular phones can be used to improve response-time during medical and other emergencies and each flood-party member should be familiar with the use of these phones. Should cellular phones not be available for all flood parties, one-person parties, if there are any, will be given priority. For a listing of radio and cellular phone assignments and related information, see **Appendix 2**. During flood events, adjustments in phone assignments will be made by the flood coordinator or his designate.

Travel

Travel is a necessary part of field activity, and routinely may be the most dangerous component of our work schedule. During and following serious flood events, routine hazards of travel may be accompanied by hazardous conditions. These can include any and all of the following: wet, slippery road surfaces; poor visibility as a result of inclement weather, sunrise, sunset, or darkness of night; roads and bridges inundated by flood waters, or damaged from previous floodwater inundation; roads and bridges obstructed by debris from winds and/or floodwaters; and other vehicles. You should be alert for the existence or possible occurrence of any of these conditions. A reasonable response may be to drive slower and more defensively, remembering that other drivers are subjected to the same conditions and their failures may endanger you. It is important that **your driving be tailored to fit the conditions**. During floods, additional sounding weights may become part of the equipment for individual vehicles. It is important that these **weights be properly secured during travel**.

Data Collection

During floods, streamflow measurements, water-quality samples, and sediment samples can be obtained by persons from boats, bridges, and cableways; the same as during routine operations. However, the presence of certain conditions can make data collection inherently more dangerous during floods, and flood parties must always be conscious of the existence or possibility of occurrence of these conditions. Activities from boats, bridges, and cableways are all affected by the following conditions: high stream stage; fast velocity; turbulent flow; and debris, including large trees. Large debris is likely the most dangerous hazard and every effort should be made to avoid contact with it because of uncertainty of its size since only a small portion of the material may be exposed. However, the possibility always exists that suspended measuring or sampling equipment may become entangled with debris, especially trees. All reels should be equipped with break-away cables, and the flood crew should always have wire-cutters available for immediate use to cut the suspension cable if necessary. **CUTTING A CABLE IS DANGEROUS**. If you cut a cable, you must be prepared for serious recoil of booms, bases and other pieces of equipment. Cutting a cable when working in a cablecar is especially dangerous. You must be prepared to prevent yourself from being sling shot as car returns toward its normal position. Be sure other pieces of equipment are secured, especially the car puller.

When working from a bridge, the crew must be alert to the possibility that bridge abutments may wash-out, or that the structure itself may be washed away. Careful inspection and continuing observation generally will indicate that destruction is occurring. If serious scouring at an abutment(s) becomes obvious, you probably should get off of the bridge. In Alabama during flooding, it is standard operating procedure for the Department of Transportation (DOT) to deny access to bridges when water is on the “low steel”, even if there is no evidence of bridge failure. If there is no evidence of bridge damage or failure, and you are certain that the structure is safe, you may have to exert considerable effort to obtain permission to get onto the bridge. It will very likely require approval from the supervisor of the DOT personnel on the site. If you are allowed to work on a bridge closed to the public, traffic is not a problem. However, for a bridge which is open for travel, traffic will be a problem. Inclement weather, poor visibility, and increased volume of traffic may all combine to increase the seriousness of the traffic problem. Traffic volume may increase simply because of human curiosity. There will be many persons crossing the stream just to see what the flood looks like, and the really curious ones will stop to find out what you are

doing. You must immediately insist that for the safety of everyone, they should quickly move along. If possible, this should be done courteously; but "whatever it takes".

For dealing with traffic on bridges, there are numerous items available including vehicle flashers and additional emergency flashers, cones, signs, flags, flagmen, and reflective vests. **USE THEM!** In addition, there may be local law enforcement personnel available for assistance. These include city and county police, the county sheriff, and the Alabama Highway Patrol. They are usually willing to provide traffic control during flood work. The blue flashing lights on their vehicles get the attention of others. The DOT should also aid in traffic control.

In the Alabama WSC, boats are generally not used during severe flooding for making conventional streamflow measurements. However, sediment and water-quality samples are routinely collected using boats on the larger rivers in Alabama, such as the Alabama River and Tombigbee River. Boats are used during flooding to access gaging stations and for other transportation as required. Whether used for data collection or simply for transportation, the operators and occupants of boats must be cognizant of the additional dangers of greater depths, higher velocities, turbulent flow, and floating debris present during flood events. During severe flooding, the Alabama WSC has the capability to obtain streamflow measurements via a boat-mounted Acoustic Doppler Current Profiler (ADCP). The crew for this activity generally consists of three persons; a boat operator, ADCP operator, and a "spotter". The "spotter" is responsible for watching for floating debris in the channels and for submerged stumps, trees, and other hazards in the overbank sections. The three-person crew seems reasonable and the Alabama WSC has adopted it as standard operating procedure when using the ADCP during floods.

If used appropriately, personal protective equipment and boat-safety equipment which are routinely provided are sufficient for survival should an accident occur. The appropriate use of your life vest or floater coat is to wear it on your body.

If during normal operations you make proper use of the safety materials, supplies and equipment provided to you and you perform your duties in a safe manner, then safety, relative to flood work, will be just another day in the field. However, you should be aware of conditions that may make field work during floods inherently more dangerous than on routine occasions. Occasional reading of the safety section of this flood plan will assist you in recognizing these conditions and provide a framework for action when they occur.

REFERENCES

Atkins, J.B., 1996, Magnitude and frequency of floods: U.S. Geological Survey Water-Resources Investigations Report 95-1499.

Buchanan, T.J., and Somers, W.P., 1969, Discharge measurements at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, book 3, chap. A8.

Rantz, S.E., and others, 1982, Measurements and computation of streamflow, volumes 1 and 2: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

Appendixes

FLOOD PERSONNEL

Personnel will be assigned to field parties and geographic areas as required to cover the magnitude of the flood event. Assignments will be made by the WSC Flood Coordinators, Rick Treece (Montgomery) and Vic Stricklin (Tuscaloosa) or Alternate Flood Coordinator, T.S. Hedgecock.

CONTINUING DUTIES

WSC Personnel:

During potential flood periods, those who routinely make data-collection field trips of 3 days or more in length will:

(1) prior to departure, obtain some information concerning the long-range weather forecast,

(2) as dictated by the weather forecast, make contact with the WSC or field office supervisory personnel daily; additional contacts at the direction of appropriate personnel, and

(3) communicate immediately to the Flood Coordinators all rainfall and stage information that would be helpful in determining the extent and magnitude of possible flooding.

It shall be the responsibility of all personnel to communicate to the Flood Coordinators, immediately from the field, all information relative to flooding.

Flood Personnel:

Flood party chiefs and individuals with specific flood-event assignments will maintain data collection equipment to be used by them during flooding. The equipment is to include a briefcase containing items such as stop watches, earphones, a steel tape, a tape weight, a flashlight, a calculator, current meter rating tables, a note pad, paper, forms (such as measurement notes and inspection forms), pencils/pens, a copy of Water-Supply Paper 2175, the Alabama WSC Flood Plan, the latest publication of Water Resources Data for Alabama, and WRIR 95-4199 (latest flood-frequency reports).

Montgomery and Tuscaloosa Flood Coordinators:

Montgomery and Tuscaloosa Flood Coordinators will work together to maintain the lists of gaging station and crest-stage gage measurement needs. They will also see that field crews maintain streamflow-measuring equipment according to Flood Plan instructions.

Sediment Equipment:

The Montgomery and Tuscaloosa data sections are currently responsible for maintaining an adequate supply of operable suspended and bed-material sediment samplers and related equipment as prescribed by the Flood Plan, ensuring appropriate distribution among Field Headquarters. However, at the current time there is no funding for collection of samples.

WSC Flood Coordinators:

The WSC Flood Coordinators are responsible for ensuring that:

(1) all flood plan appendices are current,

(2) appropriate personnel are familiar with the flood plan, and

(3) personnel with specific continuing duties are meeting their responsibilities.

FLOOD-EVENT DUTIES

Flood Coordinators:

The flood coordinators will use all available sources of rainfall and flow information to determine the extent and magnitude of flooding; assign personnel based on initial evaluation of the situation; examine data and other reports as received from the field and modify initial assignments and/or make additional assignments when necessary. Throughout the flood, the coordinators will maintain communications with adjacent WSCs and other Federal, State, and municipal

agencies and advise the WSC staff of existing and forecasted flood conditions. The coordinators will continue to direct activities during follow-up operations until the level of work has returned to normal.

Alternate Flood Coordinator:

The Alternate Flood Coordinator will assist the WSC Flood Coordinators, act as WSC Flood Coordinator, or perform other duties as may be required.

Flood Parties:

Collect data as directed by the Flood Coordinators or alternate, and maintain communications according to Flood Plan instructions.

ALABAMA WSC FLOOD PLAN - Appendix 2

COMMUNICATION USER INSTRUCTION

The most common calls by field personnel will be made from Southern Linc (SL) radio/ phones that have been assigned to each individual. FTS 2001 can be accessed by off-net dialing from commercial stations (pay phones), using MCI calling cards that have been issued to each employee.

ALABAMA WSC PERSONNEL

Brian Atkins ** - **Studies Section Chief**
3105 Fernway Court
Montgomery, AL 36111
(334) 395-4140 - office
(334) 262-3542 - home
(334) 235-1112 - cell

Britane Bell
2269 Semmes Drive
Montgomery, AL 36106
(334) 395-4135 - office
(334) 279-8328 - home
(727) 459-7697 - cell

Danny Berlin **- **Mont. Lead Tech.**
200 Patricia Court
Coosada, AL 36020
(334) 395-4122
(334) 285-7954 - home
(334) 850-0993 - SL

Robert Brendlinger **
16113 Seminole Trail
Northport, AL 35475
(205) 752-8104 X225 - office
(205) 657-1319 - personal cell
(205) 361-3692 - SL

Athena Clark - **WSC Director**
1818 Beauvoir Lake Drive
Montgomery, AL 36117
(334) 395-4141- office
(334) 799-7890 - cell

Jeremy Crosby**
76 Arcadia Drive
Tuscaloosa, AL 35404
(205) 752-8104 X229 - office
(205) 633-2051- home
(205) 361-1767 - SL

Ben DeWit
211 West Longleaf Drive Apt. 309
Auburn, AL 36832
(334) 395-4135 - office
(251) 937-5501 - home
(251) 422-0717 - cell

Randall L. Fondren **
1637 Mallard Circle
Tuscaloosa, AL 35405
(205) 752-8104 X233 - office
(205) 752-3729 - home
(205) 361-1660 - SL

Amy Gill - **QW Specialist**
4890 Paige Hills Drive
Elmore, AL 36025
(334) 395-4128 - office
(334) 285-6339 - home
(334) 850-0995 - SL

William A. Hard - **Tuscaloosa Lead Tech.**
114 Arcadia Drive
Tuscaloosa, AL 35404
(205) 752-8104 X224 - office
(205) 633-0909 - home
(205) 361-1661 - SL

Scott Hedgecock - **SW Specialist/Alternate Flood Coordinator**
106 Lina Drive
Prattville, AL 36067
(334) 395-4133 - office
(334) 365-7869 - home
(334) 850-0975 - SL
(334) 224-1888 - cell

Kevin Kelly
1993 Ballard Road
Luverne, AL 36049
(334) 395-4144 - office
(334) 372-6061- home
(334) 850-0984 SL

Darrell S. Lambeth ** - **Acoustics Spec.**
609 South Capitol Parkway
Montgomery, AL 36107
(334) 395-4136 - office
(334) 832-9464 - home
(334) 850-0985 - SL

Katie M. Lee
188 Pineridge Drive
Tallassee, AL 36078
(334) 395-4137 - office
(334) 707-0786 - home
(334) 707-0785 - Ben

Richard Moreland ** - **Safety Officer**
542 Clayton Street
Montgomery, AL 36104
(334) 395-4138 - office
(334) 265-1690 - home
(334) 850-0992 - SL

Ann K. Mcpherson
755 Park Ave. Apt. B
Montgomery, AL 36106
(334) 395-4123 - office
(334) 261-1030 - home
(334) 850-0990 - SL

Will S. Mooty
619 Lockwood Street
Auburn, AL 36830
(334) 395-4130 - office
(334) 887-3251 - home
(334) 850-0991 (SL)

Matthew Nolte
1200 Lyman Ct.
Montgomery, AL 36109
(334) 395-4142 - office
(334) 272-6154 - home
(334) 328-8263 - cell

Jymalyn Redmond
4659 Huffman Road
Grady, AL 36036
(334) 395-4125 - office
(334) 562-9195 - home
(334) 590-7010 - cell
(334) 850-6656 - SL

James Robinson - **GW Specialist**
814 Bridleway Court
Pike Road, AL 36064
(334) 395-4131 - office
(334) 272-7604 - home
(334) 850-0994 - SL

Bill Psinakis - **NWIS/ADAPS DBA**
4316 Florence Street
Montgomery, AL 36109
(334) 395-4139 - office
(334) 270-1378 - home
(334) 850-3092 - SL

Tyler Sansing
13675 Belaire Estates
Coker, AL 35452
(205) 752-8104 X230 - office
(205) 339-8941 - home

Lakeisha Scott
1318 Central Road
Eclectic 36024
(334) 395-4127 - office
(334) 541-4712 - home
(334) 318-0093 - cell
(334) 541-4029 - mother

Victor E. Stricklin - **Field Office Chief/ Flood Coordinator**
336 Revere Road
Tuscaloosa, AL 35405
(205) 752-8104 X223 - office
(205) 366-0709 - home
(205) 361-1663 - SL

Rick Treece - **Data Chief/Flood Coordinator**
500 Towne Lake Drive
Montgomery, AL 36117
(334) 395-4126 - office
(334) 356-2338 - home
(334) 799-4557 - cell

Michelle T. Wells
14975 Walker Estates Lane
Sylvan Loop Road
Fosters, AL 35463
(205) 752-8104 X226 - office
(205) 361-4940 (SL)
(205) 349-2128 (Home)

Acoustic Doppler Current Profiler (ADCP) Certified Personnel **

ALABAMA WSC CELLULAR PHONES

The WSC has several cellular phones and all Flood Parties will have a cellular phone, if possible. Most individuals have a radio/phone (numbers provided on previous page). If there is a shortage of phones, more Flood Parties than phones, one-person Parties will have phone-possession priority over multi-person parties. Some cellular phones are assigned to specific individuals and others are maintained in a WSC Pool. It shall be the responsibility of each Flood Party to inform the Flood Coordinator of the phone in its possession. An individual with a permanent assignment will not be required to communicate with the Flood Coordinator unless no one in his Flood Party has a permanently assigned phone.

STREAMFLOW STATIONS WITH TELEPHONE MODEMS

02465000 - Black Warrior River above Oliver L&D . . . . . (205) 752-6785

02465005 - Black Warrior River below Oliver L&D . . . . . (205) 752-6785

02467000 - Tombigbee River above Demopolis L&D. . . . . (334) 289-9966

02467001 - Tombigbee River below Demopolis L&D. . . . . (334) 289-9966

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY

(http://water.usgs.gov/):

CHATTAHOOCHEE RIVER BASIN

02342500 - Uchee Creek near Fort Mitchell
02342933 - South Fork Cowikee near Batesville
0234296910 - Chattahoochee River at Coast Guard Dock at Eufaula
02343802 - Chattahoochee River below Andrews L & D

CHOCTAWHATCHEE RIVER BASIN

02361000 - Choctawhatchee River near Newton
02361500 - Choctawhatchee River near Bellwood
02362000 - Choctawhatchee River near Geneva
02362240 - Little Double Bridges Creek near Enterprise
02363000 - Pea River near Ariton
02364000 - Pea River near Elba
02364500 - Pea River near Samson

CONECUH RIVER BASIN

02369800 - Blackwater River near Bradley
02371500 - Conecuh River at Brantley
02372250 - Patsaliga Creek near Brantley
02372422 - Conecuh Creek below PT A Dam near River Falls
02372430 - Conecuh River near River Falls
02373000 - Sepulga River near McKenzie
02374250 - Conecuh River at Highway 41 near Brewton
02374500 - Murder Creek near Evergreen
02374700 - Murder Creek at Highway 41at Brewton
02374745 - Burnt Corn Creek at Highway 41 near Brewton
02374950 - Big Escambia Creek at Sardine Br near Stanley Cross Roads

PERDIDO RIVER BASIN

02376115 - Eleven mile Creek near Pensacola, Florida
02376500 - Perdido River at Barrineau Park
02377570 - Styx River near Elsanor

FISH RIVER BASIN

02378300 - Magnolia River at U.S. Highway 98 near Foley

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY (continued):

02378500 - Fish River near Silverhill

COOSA RIVER BASIN

02397530 - Coosa River at State Line
02398300 - Chattooga River above Gaylesville
02398950 - West Fork Little River at Desota Park near Fort Payne
02399200 - Little River near Blue Pond
02399500 - Coosa River at Leesburg
02400100 - Terrapin Creek at Ellisville
02400496 - Coosa River at Steamplant near Gadsden
02400500 - Coosa River at Gadsden
02400680 - Big Wills Creek at State Highway 35 near Fort Payne
02401000 - Big Wills Creek near Reece City
02401390 - Big Canoe Creek at Ashville
02403310 - Choccolocco Creek near Boiling Springs
02404400 - Choccolocco Creek at Jackson Shoal near Lincoln
02405500 - Kelly Creek near Vincent
02406500 - Talladega Creek at Alpine
02407000 - Coosa River at Childersburg
02407514 - Yellowleaf Creek near Westover
02407526 - Coosa River at Gaston Steamplant near Wilsonville
02408540 - Hatchet Creek below Rockford
02411600 - Coosa River at Wetumpka

TALLAPOOSA RIVER BASIN

02411930 - Tallapoosa River below Tallapoosa, GA
02412000 - Tallapoosa River near Heflin
02413300 - Little Tallapoosa River near Newell
02414500 - Tallapoosa River at Wadley
02414715 - Tallapoosa river near New Site (Horseshoe Bend)
02415000 - Hillabee Creek near Hackneyville
02418230 - Sougahatchee Creek at County road 188 near Loachapoka
02418760 - Chewacla Creek at Chewacla State Park near Auburn
02419000 - Uphapee Creek near Tuskegee
02419500 - Tallapoosa River at Milstead
02419890 - Tallapoosa River near Montgomery (Montgomery water plant)

UPPER ALABAMA RIVER BASIN

02419988 - Alabama River at Montgomery
02420000 - Alabama River at U.S. Highway 31 near Montgomery
02421000 - Catoma Creek near Montgomery
02421350 - Alabama River at Jones Bluff (Pool)
02421351 - Alabama Riverbelow Robert F. Henry L&D near Benton (Tail)
02423000 - Alabama River at Selma

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY (continued):

CAHABA RIVER BASIN

02422500 - Mulberry Creek at Jones
02423130 - Cahaba River at Trussville
02423380 - Cahaba River near Mountain Brook
02423397 - Little Cahaba River below Leeds
02423398 - Little Cahaba River near Leeds
02423414 - Little Cahaba River at Cahaba Bea Road, near Cahaba Heights
02423425 - Cahaba River near Cahaba Heights
02423496 - Cahaba River near Hoover
02423500 - Cahaba River near Acton
0242354750 - Cahaba Valley Creek at Cross Creek Road at Pelham
02423555 - Cahaba River near Helena
02423586 - Shades Creek near Homewood
02423630 - Shades Creek near Greenwood
02424000 - Cahaba River at Centreville
02424590 - Cahaba River near Suttle
02425000 - Cahaba River near Marion Junction

LOWER ALABAMA RIVER BASIN

02427250 - Pine Barren Creek near Snow Hill
02427505 - Alabama River Miller Ferry (Pool)
02427506 - Alabama River Miller Ferry (Tail)
02428400 - Alabama River near Claiborne (Pool)
02428401 - Alabama River near Claiborne (Tail)
02429540 - Alabama River at Choctaw Bluff

UPPER TOMBIGBEE RIVER BASIN

02438000 - Buttahatchee River below Hamilton
02442500 - Luxapallila Creek at Millport
02444160 - Tombigbee at Beville L&D near Pickensville (Pool)
02444161 - Tombigbee at Beville L&D near Pickensville (Tail)
02444500 - Tombigbee River near Cochrane
02446500 - Sipsey River near Elrod
02447025 - Tombigbee at Gainesville (Pool)
02447026 - Tombigbee below Gainesville (Tail)
02448500 - Noxubee River near Geiger
02448900 - Bodka Creek near Geiger

MULBERRY FORK BASIN

02449882 - Blue Springs Creek near Blountsville
02450000 - Mulberry Fork near Garden City
02450180 - Mulberry Fork near Arkedelphia
02450250 - Sipsey Fork near Grayson
02450825 - Clear Creek near Poplar Springs
02453000 - Blackwater Creek near Manchester

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY (continued):

02453500 - Mulberry Fork at Cordova
02454055 - Lost Creek above Parrish

LOCUST FORK BASIN

02455000 - Locust Fork near Cleveland
02455900 - Locust Fork at Warrior
02455980 - Turkey Creek at Sewage Plant near Pinson
02456000 - Turkey Creek at Morris
02456500 - Locust Fork at Sayre
02456980 - Fivemile Creek at Lawson Road near Tarrant City
02457000 - Fivemile Creek at Ketona
02457595 - Fivemile Creek near Republic
02457670 - Fivemile Creek Bel Prudes Creek near Graysville
02458148 - Village Creek at 86th Street North at Roebuck
02458200 - Village Creek at Apalachee Street at Birmingham
02458300 - Village Creek at 24th Street at Birmingham
02458450 - Village Creek at Avenue W at Ensley
02458502 - Village Creek near Pratt City
02458600 - Village Creek near Docena

LOWER BLACK WARRIOR RIVER BASIN

02461130 - Valley Creek at Center Street at Birmingham
02461500 - Valley Creek near Bessemer
02461640 - Valley Creek below Bessemer
02462000 - Valley Creek near Oak Grove
02462500 - Black Warrior River at Bankhead (Pool)
02462501 - Black Warrior River below Bankhead (Tail)
02462951 - Black Warrior at Holt (Pool)
02462952 - Black Warrior below Holt (Tail)
02464000 - North River near Samantha
02464146 - Turkey Creek near Tuscaloosa
02464360 - Binion Creek below Gin Creek near Samantha
02464800 - Lake Tuscaloosa near Tuscaloosa
02465000 - Black Warrior River at Northport
02465005 - Black Warrior River below Oliver Dam near Tuscaloosa(Tail)
02465292 - Cribbs Mill Creek at Tuscaloosa
02465493 - Elliotts Creek at Moundville
02466030 - Black Warrior River at Selden L&D near Eutaw (Pool)

LOWER TOMBIGBEE RIVER BASIN

02466031 - Black Warrior River below Selden Dam near Eutaw
02467000 - Tombigbee River at Demopolis L&D near Coatopa (Pool)
02467001 - Tombigbee River below Demopolis L&D near Coatopa (Tail)
02467500 - Sucarnoochee River at Livingston

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY (continued):

02469525 - Tombigbee River near Nanafalia
02469761 - Tombigbee River at Coffeeville L&D near Coffeeville (Pool)
02469762 - Tombigbee River below Coffeeville L&D near Coffeeville (Tail)
02469800 - Satilpa Creek near Coffeeville
02470072 - Bassett Creek at US Highway 43 near Thomasville

MOBILE RIVER BASIN

02470050 - Tombigbee River at Steamplant near Leroy
02470629 - Moblie River at City Intake at Bucks
02470630 - Moblie River at Barry Steamplant near Bucks
02471001 - Chickasaw Creek near Kushla
02471017 - Mobile River at Alabama State Docks near Mobile
02471078 - Fowl River at Half-Mile Rd near Laurendine

PASCAGOULA RIVER BASIN

02479560 - Escatawpa River near Agricola, Mississippi
02479945 - Big Creek at county road 63 near Wilmer
02479980 - Crooked Creek near Fairview
02480002 - Hamilton Creek at Snow Road near Semmes

UPPER TENNESSEE RIVER BASIN

03573182 - Scarham Creek near McVille
03574500 - Paint Rock River at Woodville
0357479650 - Hester Creek at Buddy Williamson Road near Plevna
03575100 - Flint River at Brownsboro
0357526200 - Big Cove Creek at Dug Hill Road near Huntsville
03575500 - Tennessee River at Whitesburg
0357568650 - Aldridge Creek at Toney Drive at Huntsville
0357568980 - Aldridge Creek at Sherwood Drive at Huntsville
03575700 - Aldridge Creek near Farley
03575830 - Indian Creek near Madison
0357586650 - Fagan Creek at Adams Street at Huntsville
0357587090 - West Fork Pinhook Creek at Blue Spring Road at Huntsville
0357587140 - East Fork Pinhook Creek at Winchester Road at Huntsville
0357587400 - Pinhook Creek at Mastin Lake Road at Huntsville
0357587728 - Dallas Branch at Coleman Street at Huntsville
03575890 - Pinhook Creek at Clinton Avenue at Huntsville
0357591500 - Broglan Branch at Oakwood Avenue at Huntsville
03575933 - Broglan Branch at Clinton Avenue at Huntsville
03575950 - Huntsville Springs Branch at Johnson Road at Huntsville
03575980- McDonald Creek at Patton Road near Huntsville
03576250 - Limestone Creek near Athens
03577150 - Tennessee River at Decatur

STREAMFLOW STATIONS WITH SATELLITE TELEMETRY (continued):

LOWER TENNESSEE RIVER BASIN

03586500 - Big Nance Creek at Courtland

U.S. GEOLOGICAL SURVEY (WSC) OFFICES

Alabama:

Tuscaloosa Field Office Chief: Victor Stricklin -**(205) 752-8104 ext 223**

Montgomery WSC:
Data Chief: Rick Treece**(334) 395-4126**
Surface Water Specialist: Scott Hedgecock **(334) 395-4133**-
Director: Athena Clark **(334) 395-4141**-

Florida

Tallahassee **(850) 942-9500 ext 3028**
WSC: Data Chief Stewart Tomlinson

Georgia:

Atlanta **(770) 903-9100**
Hydrologic Records: Brian McCallum **903-9127**
Hydrologic Data Unit: John Kerestes **903-9134**
Field Headquarters: George Bailey **903-9124**

Tifton **(912) 382-6353**
Field Headquarters: Terry Nichols

Albany **(229) 430-8420**
Field Headquarters: Mark Reynolds

Mississippi:

Pearl **(601) 933-2900**
Director: Michael Plunkett **(601) 933-2940**
Data Chief: Mike Runner **(601) 933-2941**
Records Section: John Storm **(601) 933-2951**

North Carolina-

Raleigh **(919) 571-4017**
WSC: Jeanne Robbins (SW Specialist & Data Chief)
(919) 571-4073
Hydrologic Records Section: Ron Garrett

South Carolina:

Columbia **(803) 750-6140**
WSC: Paul Conrads (SW Specialist)
(803) 750-6112
Hydrologic Data Management Unit: Ted Cooney

Tennessee:

Nashville **(615) 837-4753**
Data Chief: Paul Hampson
(615) 837-4732
George Law
(615) 837-4731
Rodney Knight (SW Specialist)

Southeast Regional Office

Norcross **(770) 409-7717**
Surface Water Specialist: Larry Bohman

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Weather Service Forecast Offices

Birmingham, Alabama: (205) 664-3010
Jason Wright
Mobile, Alabama: (251) 633-6443
Gary Beeler
Peachtree City, Georgia: (770) 486-0028
Service Hydrologist
Atlanta, Georgia: (770) 486-1333
Barry Gooden
Tallahassee, Florida: (850) 942-8999
Bob Goree

Recent rainfall and river stage data and current weather forecasts for Alabama and adjacent areas can be obtained from the appropriate (WSFO).

Southeast River Forecast Centers

Peachtree City, Georgia: (770) 486-0028
Hydrologist-in-Charge: Brad Gimmestad
Slidell, Louisiana: (985)-641-4343
Hydrologist-in-Charge: David Reed

The River Forecast Center uses real-time river stage and rainfall data, and rainfall-runoff models to forecast peak flood stages for major streams in the Southeast.

http://www.srh.noaa.gov/serfc

Flood forecasts are available for the following sites:

Station name	Station number	Flood stage (ft)	Gaging station
Choctawhatchee River nr Newton	02361000	19	Active
Pea River at Elba	02364000	30	Active
Coosa River at Leesburg	02399500	564	Active
Coosa River at Gadsden	02400500	511	Active
Coosa River at Childersburg	02407000	402	Active
Coosa River at Wetumpka	02411600	45	Active
Tallapoosa River at Wadley	02414500	13	Active
Tallapoosa River at Milstead	02419500	40	Active
Tallapoosa River near Montgomery	02419890	25	Active

Station name	Station number	Flood stage (ft)	Gaging station
Alabama River at Montgomery	02419988	35	Active
Catoma Creek near Montgomery	02421000	20	Active
Alabama River at Robert F. Henry L&D	02421351	122	Active
Alabama River at Selma	02423000	45	Active
Cahaba River near Cahaba Heights	02423425	14	Active
Cahaba River at Centreville	02424000	23	Active
Cahaba River near Suttle	02424590	32	Active
Cahaba River near Marion Junction	02425000	36	Active
Alabama River at Millers Ferry L&D	02427506	66	Active
Alabama River below Claiborne L&D	02428401	42	Active
Tombigbee River at Bevill L&D	02444160	122	Active
Tombigbee River at Heflin L&D	02447025	101	Active
Locust Fork at Sayre	02456500	25	Active
Village Creek at Avenue W at Ensley	02458450	10	Active
Black Warrior River at Bankhead L&D	02462500	189	Active
Black Warrior River at Holt L&D	02462951	140	Active
Black Warrior River at Oliver L&D	02465000	129	Active
Black Warrior River at Selden L&D	02466030	90	Active
Tombigbee River below Demopolis L&D	02467001	68	Active
Sucarnoochee River at Livingston	02467500	18	Active
Tombigbee River below Coffeeville L&D	02469762	29	Active
Tombigbee River near Leroy	02470050	24	Active
Paint Rock River near Woodville	03574500	16	Active
Flint River near Chase	03575000	16	Inactive
Tennessee River at Whitesburg	03575500	17	Active
Tennessee River at Florence	03589500	18	Active

ALABAMA POWER COMPANY OFFICE DIRECTORY

Manager Environmental and Research: (205) 257-3220

Charles Stover

Coordinator Reservoir Operations: (205) 257-3207

Andy Sheppard

Load Dispatcher: (205) 257-3545 (Hours: 0800-1700)

Weekend Dispatcher: (205) 257-4010

U.S. ARMY CORPS OF ENGINEERS OFFICE DIRECTORY

Mobile District

Hydraulic Data: (251) 690-2718, Doug Otto

Water Management: (251) 694-4097, General Operations
(251) 690-3381, Memphis Vaughan
(251) 690-3054, Glen Duval
(251) 690-2733, Steve Lloyd
(251) 690-2735, James Hathorn
(251) 690-3386, Charles Yanny

TENNESSEE VALLEY AUTHORITY OFFICE DIRECTORY

Flood Information:

TVA OPERATOR: (865) 632-2101
Knoxville: (865) 632-6115, Roger Millstead
Knoxville: (865) 632-6851, Stephen C. Allen
Knoxville: (865) 632-6847, Steven Amick

Data Management Section:

Knoxville: (865) 632-2859, Susan Barksdale
Knoxville: (865) 632-4222, L. Wayne Hamberger

Reservoir Operations:

Knoxville: (865) 632-7063, Lead Engineer
Knoxville: (865) 632-6065 Janice Pinkston

Field Offices:

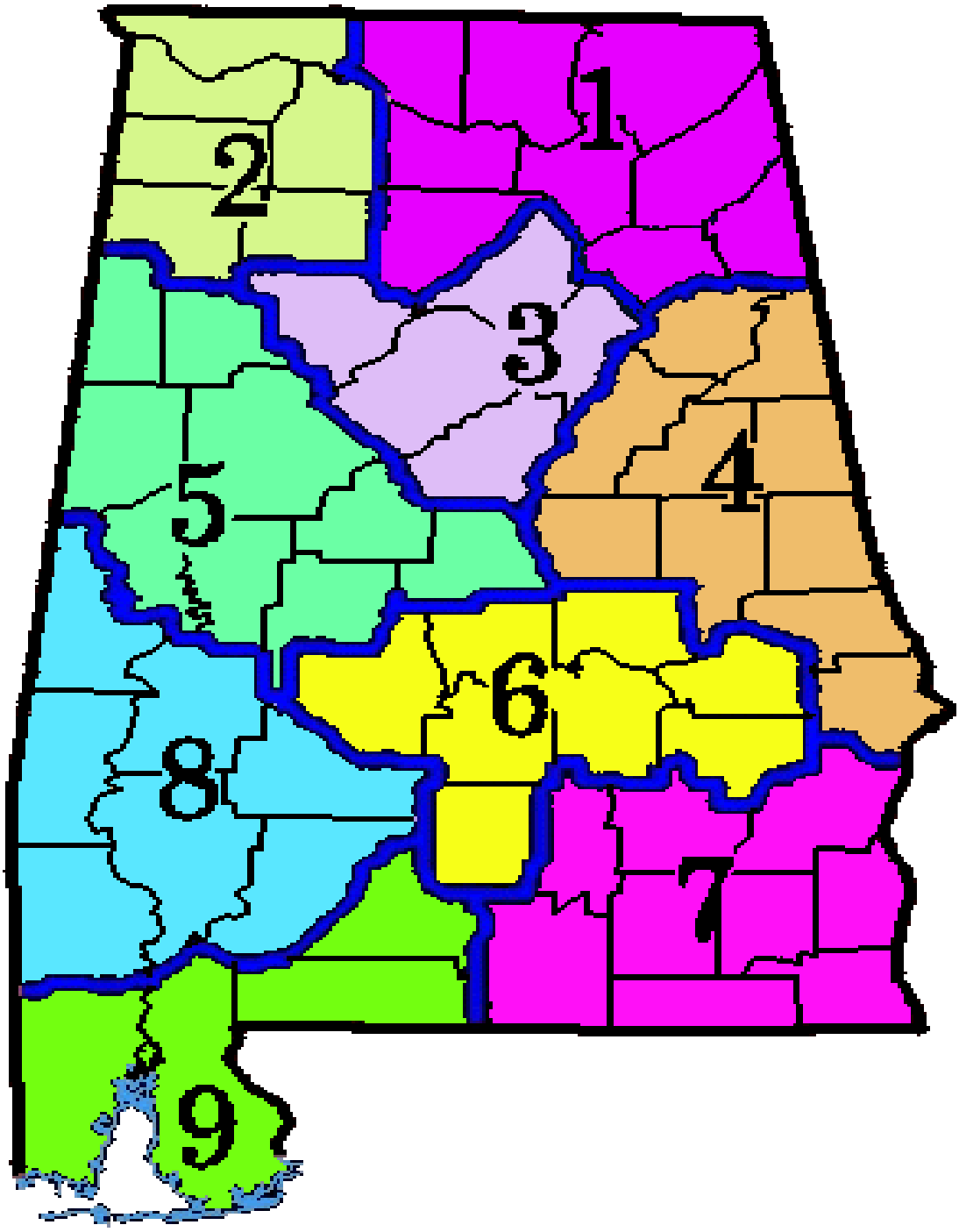
Knoxville: (865) 632-1901, Chuck Bach (Supervisor)
Knoxville: (865) 632-4483, Steve McLemore (Supervisor)
Knoxville: (865) 632-2420, Brent Alexander
Muscle Shoals: (256) 368-3752 Wesley Jaynes

ALABAMA STATE TROOPERS

City	Telephone number
Alexander City:	(256) 234-7311
Birmingham:	(205) 322-4691
Decatur:	(256) 353-0631
Dothan:	(334) 983-4587
Eufaula:	(334) 687-2054
Evergreen:	(251) 578-1315
Gadsden:	(256) 546-6385
Grove Hill:	(251) 275-3240
Hamilton:	(205)921-3121
Huntsville:	(256) 518-9573
Jacksonville:	(256) 435-3521
Mobile:	(251) 660-2300
Montgomery:	(334) 242-4128
Opelika:	(334) 745-4651
Selma:	(334) 874-8234

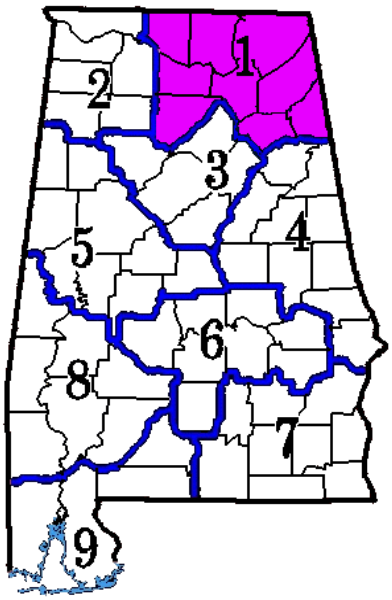
Sheffield:	(256) 383-9212
Tuscaloosa:	(205) 553-5531

Alabama Department of Transportation
Divisional Map



Alabama Department of Transportation
First Division

23445 Highway 431, North
P.O. Box 550
Guntersville, AL 35976
(256)582-2254
Fax (256) 582-8922



Division Engineer
Johnny L. Harris
Harrisj@dot.state.al.us

Office Manager
Rayburn Hornsby
hornsbyr@dot.state.al.us
(256)582-2254

Equipment Maintenance Supt.
Wayne Phillips
Attnet 524-1117

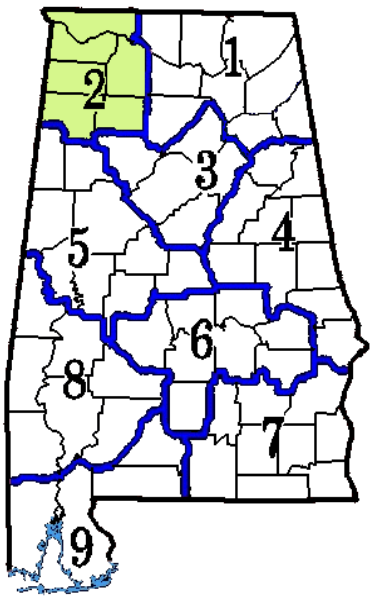
District in First Division

Counties: Cherokee, Cullman, Dekalb, Etowah, Jackson, Limestone, Madison, Marshall, and Morgan

District 1 (256)353-8862 Decatur	**Greg Perry, District Engineer**
District 2 (256)837-0111 Huntsville	**Robert D. Grimes, District Engineer**
District 3 (256)228-6028 Dutton	**Curtis Lowe, District Engineer**
District 4 (256)586-4178 Joppa	**Robert D. Grimes, District Engineer**
District 5 (256)442-4436 Gadsden	**Ben Thackerson, , District Engineer**

Alabama Department of Transportation
Second Division

295 Highway 20 East
Tuscumbia AL 35674
(256)389-1400
Fax (256) 389-9602



Division Engineer
James D. Brown
brownjd@dot.state.al.us

Office Manager
Sharon Brown
(256)389-1436

Equipment Maintenance Supt.
Lee A. Page
Attnet 455-1455

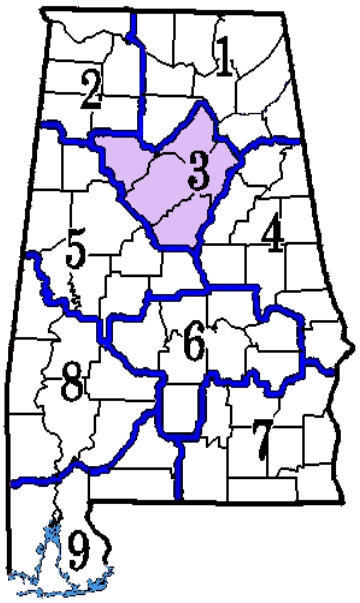
District in Second Division

Counties: Colbert, Franklin, Lauderdale, Lawrence, Marion, and Winston

District 1 (256)389-1441 Tuscumbia	**Hiram Garner, District Engineer**
District 2 (256)974-0648 Moulton	**Quin H. Baldy, District Engineer**
District 3 (256)921-2117 Hamilton	**J. Curtis Lemay, District Engineer**

Alabama Department of Transportation
Third Division

1020 Bankhead Highway
P.O. Box 2745
Birmingham, AL 35202
(205)328-5820
(800)342-3815
Fax (205) 254-3199



Division Engineer
J.F. Horsley
horsleyj@dot.state.al.us

Office Manager
Renetta Summerford
(205)581-5606

Equipment Maintenance Supt.
Roger Williams

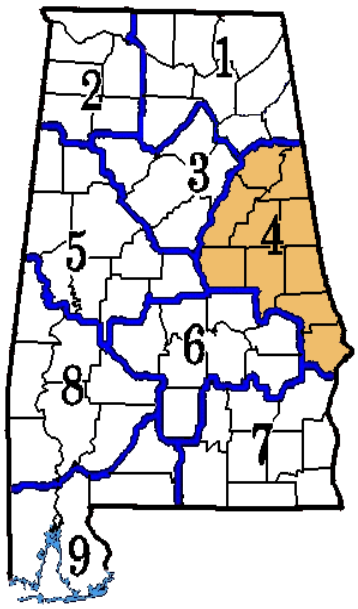
District in Third Division

Counties: Blount, Jefferson, Shelby, St. Clair, Walker

District 1 (205)581-5702 Birmingham	**Wendell Miles, District Engineer**
District 2 (205)274-2112 Oneonta	**Gary Smith, District Engineer**
District 4 (205)221-9128 Jasper	**Scottie Cole, District Engineer**
District 5 (205)668-0173 Calera	**John Gary Ray, District Engineer**

Alabama Department of Transportation
Fourth Division

Highway 280
P.O. Box 1179
Alexander City, AL 35011
(256)234-4265
(800)952-5631
Fax (256)234-3474



Division Engineer
DeJarvis Leonard
leonardd@dot.state.al.us

Office Manager
Sherry L. Payne
paynes@dot.state.al.us
(256)234-8404

Equipment Maintenance Supt.
Tim Williams
(256) 234-8520
Attnet 556-2520

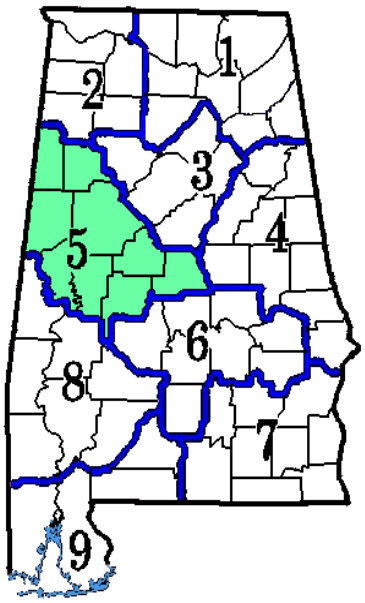
District in Fourth Division

Counties: Calhoun, Chambers, Clay, Cleburne, Coosa, Lee, Randolph, Russell, Talladega, and Tallapoosa

District 1 (256)234-8481 Alexander City	**Daryl Howard, District Engineer**
District 2 (256)820-3131 Anniston	**Shannon Jones, District Engineer**
District 3 (334)887-3341 Auburn	**John C. Trimble, District Engineer**
District 4 (256)253-2158 Hollis Crossroads	**Eric English, District Engineer**
District 5 (256)362-1240 Talladega	**Jesse Joiner, District Engineer**
District 6 (334)885-4735 Seale	**Vance Beck, District Engineer**

Alabama Department of Transportation
Fifth Division

2715 Skyland Boulevard
P.O. Box 70070
Tuscaloosa, AL 35407
(205)553-7030
(800)822-6124
Fax (205)556-0900



Division Engineer
L. Dee Rowe
rowed@dot.state.al.us

Office Manager
Cynthia Kemp (Acting)
(205)554-3201

Equipment Maintenance Supt.
Larry Cunningham
Attnet 627-4235

District in Fifth Division

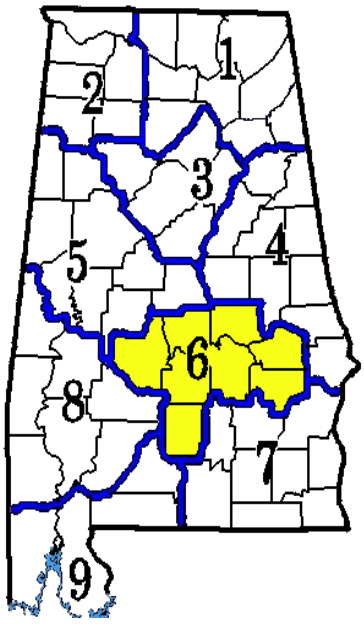
Counties: Bibb, Chilton, Fayette, Greene, Hale, Lamar, Perry, Pickens, Tuscaloosa

District 1 (205)932-8930/Fayette	**Susan Canaday, District Engineer**
District 2 (205)554-3288 /Tuscaloosa	**Ken Couch, District Engineer**
District 3 (205)367-8746/Carrolton	**Virgil M. Clifton, District Engineer**
District 4 (334)366-2954/ Maplesville	**William D McDaniel, District Engineer**
District 5 (205)624-8851/Greensboro	**Time Stone, District Engineer**

Alabama Department of Transportation
Sixth Division

1525 Coliseum Boulevard
P.O. Box 8008
Montgomery, AL 36110
(334)269-2311
(800)505-1158

Click here for more Sixth Division web page.



Division Engineer
Roger W. Collier
collierr@dot.state.al.us

Office Manager
Terri Cole
(334)241-8563

Equipment Maintenance Supt.
James Nebhut

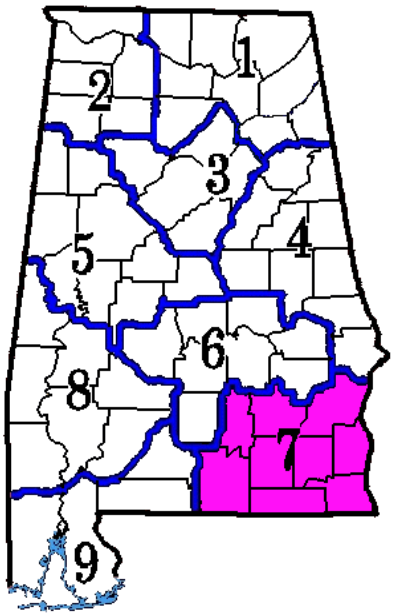
District in Sixth Division

Counties: Autauga, Bullock, Butler, Dallas, Elmore, Lowndes, Macon, Montgomery

District 1 (334)567-4379 Speigner	**Ronnie Lee, District Engineer**
District 2 (334)738-2150 Union Springs	**Johnny Reynolds, District Engineer**
District 3 (334)242-6572 Montgomery	**Mark Waits, District Engineer**
District 4 (334)382-6614 Greenville	**John N. Adams, District Engineer**
District 5 (334)875-4455 Selma	**Rex Thompson, District Engineer**

Alabama Department of Transportation
Seventh Division

Highway 87 South
P.O. Box 647
Troy, AL 36081
(334)566-4830



Division Engineer
J.M. Griffin

Office Manager
Deborah B. Rhodes
(334)670-2422

Equipment Maintenance Supt.
Carroll Dunn
Attnet 278-1461

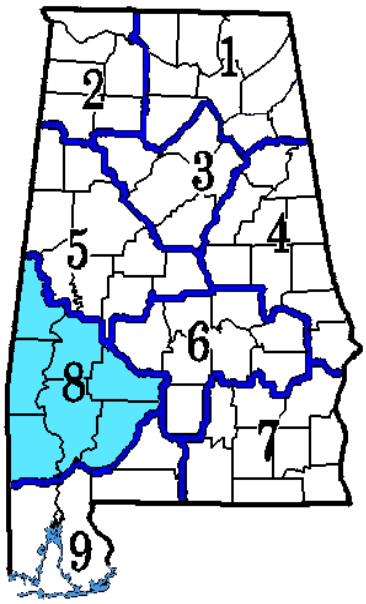
District in Seventh Division

Counties: Barbour, Crenshaw, Coffee, Covington, Dale, Geneva, Henry, Houston, Pike

District 1 (334)794-4958 Dothan	**Robert B. Maddox, District Engineer**
District 2 (334)347-8166 Enterprise	**Mark J. Graham, District Engineer**
District 3 (334)222-5555 Andalusia	**William Wofford, District Engineer**
District 4 (334)774-4542 Ozark	**Coleman Hatcher, District Engineer**
District 5 (334)670-2475 Troy	**J. Carroll Dunn, District Engineer**
District 6 (334)687-3161 Eufaula	**William T. Jinright, District Engineer**

Alabama Department of Transportation
Eighth Division

129 Grove Hill Avenue East
Grove Hill, AL 36451
(251) 275-4103



Division Engineer
Jerry L. Holt
holtj@dot.state.al.us

Office Manager
Cynthia White
(251)275-7206
whitec@dot.state.al.us

Equipment Maintenance Supt.
Ron Pruitt
pruittr@dot.state.al.us

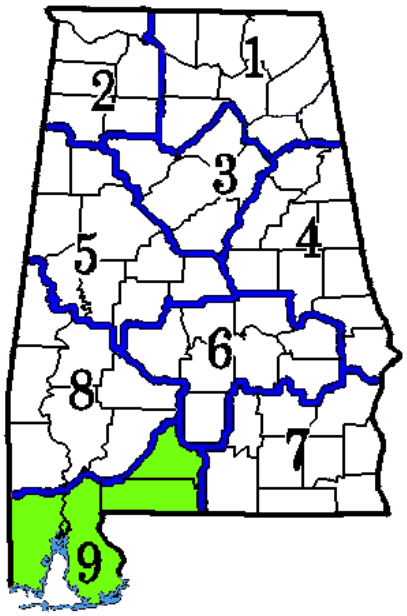
District in Eighth Division

Counties: Clarke, Choctaw, Marengo, Monroe, Sumter, Washington, and Wilcox

District 1 (205)652-7964/(800)205-7369 Livingston	**John Lawrence, District Engineer**
District 2 (334)627-3458 Thomaston	**John Geeslin, District Engineer**
District 3 (334)682-4718 Camden	**Frankie Smith, District Engineer**
District 4 (251)275-3675 Grove Hill	**Johnny Stallworth, District Engineer**

Alabama Department of Transportation
Ninth Division

1701 North Beltline Hwy.
Mobile, AL 36618
(251) 470-8200
Fax (251) 473-3624



Division Engineer
R.F. Poiroux
poirouxr@dot.state.al.us

Office Manager
Jeannette Brown
(251)470-8218
brownjea@dot.state.al.us

Equipment Maintenance Supt.
Mark A. Alford
alfordm@dot.state.al.us
(251)470-8280

District in Ninth Division
Counties: Baldwin, Conecuh, Escambia, Mobile

District 1 (251)470-8209 Mobile	**Robert B. Maddox, District Engineer**
District 2 (251)937-2086 Bay Minette	**J.S. Watkins, District Engineer**
District 3 (251)578-2434 Evergreen	**S. Jay Palmer, Acting District Engineer**
Tunnel Maintenance (251)432-4069 Mobile	**G.W. Criswell, Supervisor**

PROJECT ALERT (WRD Memorandum 90.22)

The purpose of Project Alert is to notify U.S. Geological Survey and Department of the Interior officials of significant or unusual hydrologic events so that they may disseminate information about the event to the news media and arrange for emergency operations, if necessary.

Descriptions of significant or unusual water events of interest should include the following:

- Floods and the imminent threat of floods--Information should include all of those data shown on the attached form, used for the National Water Conditions. **If all information is not readily available, prompt reporting is more important; additional information can be relayed later.** This report format does fit electronic mail -- California, Nevada, Virginia, West Virginia, and other States used it to submit data for floods which affected many sites in those States in the last several years (Note that when a peak discharge exceeds that for the 100-year flood, the ratio of the peak discharge to that of the 100-year flood should be furnished). Flood forecasts, rainfall data, and damage estimates are helpful for background. Floods with recurrence intervals of less than 10 years are not to be reported unless lives are lost or damages are widespread or sizable (in the hundreds or thousands of dollars). Information desired by the Public Affairs Office for record-high or near-record-high streamflows or where damages are newsworthy is shown on page A4 of this attachment.
- Lake and reservoir levels--Extremely high or low water levels and associated effects on shorelines, water quality, or water supplies.
- Droughts--Location and extent of areas affected by persistent low flows, low reservoir levels, declining ground-water levels, and dry soil moisture conditions that may restrict water use and affect crops and wildlife. Provisional data should include date, stream name and location, gaging station number, discharge, drainage area, recurrence interval, and comparative ranking with previous low flows. Data on rainfall, soil moisture conditions, and damage estimates are helpful for background. Descriptions of emergency actions taken by local agencies to conserve water, reduce demand, or obtain emergency supplies also will help put the event in perspective.
- Toxic and radiological spills--Reports of significant toxic and radiological spills in waterways, lakes, reservoirs, and on the ground should include date, water body name, location and nature of spill, amount of spill, water supplies endangered, and cleanup actions being taken. Effects might include fish kills, temporary closing of water-treatment plants downstream from the spills, closing of water bodies to swimming or fishing, or closing of wells.
- Ground-water levels--Location and extent of unusually high or low ground-water levels and their effects.
- Ground-water contamination--Reports of newly discovered ground-water contamination should include date of discovery, well location, contaminant, extent of contamination, and actions being taken such as the closing of wells or well fields. Population affected by the closure of a water-supply well would be useful for background interest. Contaminants include, but are not limited to, salt, radioactive materials, petroleum products, organics, trace metals, nitrates, and bacteria.

Other water-related events of unusual severity that should be reported include, but are not limited to, ice jams, mudflows, and subsidence. <u>If an event is determined to be newsworthy. then speed in reporting the event is essential.</u>

To facilitate the flow of information, the following actions should be taken:

(1) As soon as preliminary data are available, they should be entered on the **Project Alert Web Page**: **water.usgs.gov/project_alert** and follow the instructions on that page, or

(2) **fax** information to **(703) 648-5295**. Use forms on pages **B-35** and **B-36** for types of data needed to report to Headquarters, or

(3) **email** information to: **project_alert@usgs.gov**

FLOOD NEWS REPORT FORM FOR USE BY USGS PUBLIC AFFAIRS OFFICE

1. WSC/STATE_____ _____ DATE_____

2. NAME OF PREPARER_____

   TELEPHONE NUMBER_____

3. NAME OF STREAM_____

4. LOCATION OF GAGE_____

5. PEAK STREAMFLOW IN CFS_____

   RECURRENCE INTERVAL (YEARS, OR RATIO TO 100-YEAR FLOOD IF > 100 YEARS)_____

   DATE OF PEAK_____

6. IS THIS A NEW PEAK OF RECORD? NO YES (SKIP 7)

7. LAST TIME THIS FLOW WAS EXCEEDED: DATE_____

   (IF CURRENT PEAK IS NOT PEAK OF RECORD) FLOW IN CFS_____

8. AT THE TIME OF MEASUREMENT/READING, FLOW WAS: AT ITS PEAK_____

   (CHECK ONE IF DISCHARGE MEASUREMENT OR INCREASING_____

   NON-PEAK FLOW IS BEING REPORTED) DECREASING_____

9. PREVIOUS RECORD HIGH:

   FLOW IN CFS_____ DATE_____

   STAGE IN FEET_____DATE_____(IF NOT CONCURRENT WITH PEAK FLOW)

10. OTHER INFORMATION: _____

_____

_____

_____

_____

_____

NOTE: When reporting streamflow for a flood, give at least the highest flow/stage which has occurred so far. This information is always important but is of particular interest if the previous record high has been exceeded, even if flow has not yet peaked. Also, data indicating how flow is changing, both before and after the peak occurs, is important when reporting major floods on large rivers.

AL-1

FLOOD DATA INFORMATION FORM

Station_____

Date_____ Time_____

Stage_____ dh/dt_____

Peak stage_____ Time_____

Discharge Measurements:

Flow discharge .....Yes_____ No_____

Stage_____Discharge_____

Sediment discharge .....Yes_____ No_____

Weather and road conditions_____

_____

_____

_____

_____

Additional remark_____

_____

_____

_____

ALABAMA WSC FLOOD PLAN - Appendix 3

STATION PRIORITY LIST

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
02342500 Uchee Cr nr Fort Mitchell	322	(I)26.45	(I)26.45	20.00	L
02342933 South Fork Cowikee Cr nr Batesville	112	43.40	36.82	15.00	M
02361000 Choctawhatchee River near Newton	686	40.30	40.27	25.00	H
02361500 Choctawhatchee River near Bellwood	1280	18.00	(I)16.46	17.00	H
02362240 Little Double Bridges Cr nr Enterprise	21.4	16.45	(I)13.40	12.00	H
02363000 Pea River near Ariton	498	24.87	24.36	17.00	L
02364000 Pea River at Elba	959	43.5	37.90	40.00	M
02364500 Pea River at Samson	1,182	31.51	29.16	32.00	M
02369800 Blackwater River near Bradley	87.7	25.35	23.00	18.00	M
02371500 Conecuh River at Brantley	500	24.51	24.51	22.00	L
02372250 Patsaliga Creek near Brantley	442	25.67	24.40	25.00	M
02372422 Conecuh River near River Falls	1,273	52.5	48.4	45.00	H
02373000 Sepulga River near McKenzie	470	33.0	25.54	25.00	L
02374250 Conecuh River at Hwy 41, Brewton	2,661	46.6	30.16	30.00	H
02374500 Murder Creek near Evergreen	176	26.6	15.18	15.00	L
02374700 Murder Creek at Brewton	435	37.0	25.81	26.00	M
02374745 Burnt Corn Creek near Brewton	182	22.15	21.91	22.00	M
02374950 Big Escambia Creek nr Stanley Crs roads	143	16.63	13.63	14.00	H
02376115 Elevenmile Creek near Pensacola, FL	27.8	16.94	14.21	9.00	H
02375500 Escambia River near Century, FL	3,817	37.8	--	--	--
02376500 Perdido River at Barrineau Park	2394	26.30	(D)26.18	26.00	M
02377570 Styx River near Elsanor	192	28.60	26.65	27.00	M
02378300 Magnolia River near Foley	16.6	12.42	11.36	8.00	H
02378500 Fish River near Silverhill	55.3	22.78	22.26	22.00	M
02398300 Chattooga River above Gaylesville	366	24.25	21.98	20.00	L
02398950 West Fork Little River near Fort Payne	42.8	12.72	8.55	9.00	M(*)

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
02399200 Little River near Blue Pond	199	16.98	(I)16.98	10.00	M
02400100 Terrapin Creek at Ellisville	252	19.82	15.52	16.00	H
02400680 Big Wills Creek near Fort Payne	55.4	14.45	13.40	10.00	
02401000 Big Wills Creek near Reece City	182	16.3	14.37	14.00	M
02401390 Big Canoe Creek at Ashville	141	18.75	18.75	17.00	L
02403315 Choccolocco Creek near Boiling Spring	191	17.20	12.21	13.00	H
02404400 Choccolocco Creek near Lincoln	481	42.4	39.84	32.00	L
02405500 Kelly Creek near Vincent	193	27.39	(I)27.08	25.00	L
02406500 Talladega Creek at Alpine	150	16.60	(I)16.60	14.00	M
02408540 Hatchet Creek below Rockford	263	27.90	24.14	7.00	L
02411000 Coosa River near Wetumpka	10,102	47.67	--	--	as needed
02411930 Tallapoosa River below Tallapoosa, GA	272	12.87	9.40	10.00	H
02412000 Tallapoosa River near Heflin	448	31.34	31.14	20.00	M
02413300 Litttle Tallapoosa River near Newell	406	19.30	18.10	10.00	H
02414500 Tallapoosa River at Wadley	1,675	37.30	26.37	20.00	M
02414715 Tallapoosa River near New Site	2,058	23.59	22.21	14.00	H
02415000 Hillabee Creek near Hackneyville	190	28.10	23.43	10.00	L
02418230 Sougahatchee Creek near Loachapoka	71.3	8.64	7.44	7.50	H
02418500 Tallapoosa River below Tallassee	3,328	51.35	--	--	
02418760 Chewacla Creek at Chewacla SP nr. Auburn	45.8	9.19	4.66	5.00	
02419000 Uphapee Creek near Tuskegee	333	28.18	26.12	24.00	L
02419890 Tallapoosa River near Montgomery	4,646	41.9	35.29	36.00	L
02420000 Alabama River near Montgomery	15,087	56.70	43.85		
02421000 Catoma Creek near Montgomery	290	29.78	28.82	29.00	L
02422500 Mulberry Creek at Jones	203	33.6	29.34	21.00	H
02423130 Cahaba River at Trussville	19.7	19.00	19.00	7.00	L
02423380 Cahaba River near Mountain Brook	140	25.08	24.03	12.00	L
02423397 Little Cahaba River below Leeds	17.0	15.04	I	6.00	(**)

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
02423398 Little Cahaba River near Leeds	19.4	13.92	10.53	8.00	M
02423414 L. Cahaba R. at Cah. Bea Rd nr Cahaba Hts.	47	10.14	9.99	6.00	H
02423425 Cahaba River near Cahaba Heights	201	28.86	28.57	20.00	M(*)
02423496 Cahaba River near Hoover	226	38.59	13.24	15.0	M(*)
02423500 Cahaba River near Acton	230	44.25	39.83	35.00	L
0242354750 Cahaba Valley Creek at Pelham	25.6	10.89	9.93	8.00	M
02423555 Cahaba River near Helena	335	34.85	29.22	20.00	M(*)
02423586 Shades Creek near Homewood	27.1	16.08	12.10	8.00	
02423630 Shades Creek near Greenwood	72.3	15.19	14.14	13.00	M
02424000 Cahaba River at Centreville	1,027	36.63	34.96	25.00	L
02424590 Cahaba River near Suttle	1,480	44.0	40.95	41.00	M
02425000 Cahaba River near Marion Junction	1,766	43.80	41.53	42.00	L
02427250 Pine Barren Creek near Snow Hill	261	25.70	25.45	25.50	L
02428400 Alabama River at Claiborne LD	21,473	57.59	--	--	
02438000 Buttahatchee River below Hamilton	277	35.49	35.36	15.00	M
02442500 Luxapallila Creek at Millport	247	14.07	13.65	13.00	L
02444160 Tombigbee River at Bevil LD	5,750	144.33	--	--	
02444490 Bogue Chottp Creek near Memphis	52.6	16.29	13.15	14.00	H
02446500 Sipsey River near Elrod	528	18.83	18.63	15.00	L
02447025 Tombigbee River at Gainesville LD nr Gainesville	7,230	120.74	--	--	
02448500 Noxubee River near Geiger	1,097	48.58	47.54	35.00	L(*)
02448900 Bodka Creek near Geiger	158	24.20	21.87	20.00	M(*)
02449882 Blue Springs Creek near Blountsville	13.0	11.37	(I)4.97	10.00	(**)
02450000 Mulberry Fork near Garden City	365	25.04	21.65	15.00	M
02450180 Mulberry Fork near Arkadelphia	487	42.90	42.58	15.00	L
02450250 Sipsey Fork near Grayson	92.1	44.27	44.20	20.00	L
02450825 Clear Creek near Popular Spring	101	17.74	13.54	10.00	M

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
02453000 Blackwater Creek near Manchester	181	13.10	9.65	8.00	L
02454055 Lost Creek above Parrish	143	29.48	20.33	20.00	M
02455000 Locust Fork near Cleveland	303	19.20	12.24	15.00	M
02455900 Locust Fork at Warrior	707	34.27	33.38	25.00	H
02455980 Turkey Creek near Pinson	27.4	16.17	(I)16.17	*	(**)
02456000 Turkey Creek at Morris	80.9	24.95	24.67	10.00	H
02456500 Locust Fork at Sayre	885	48.60	48.44	20.0	L
02456980 Fivemile Creek at Lawson Road	18.6	10.08	(I) 10.08	3.00	
02456998 Barton Branch near Tarrant	3.11	5.43	3.37	4.00	H
02457000 Fivemile Creek at Ketona	23.9	19.14	(I)5.74	10.00	M
02457595 Fivemile Creek near Republic	51.9	25.41	(I)25.41	12.00	L
02457670 Fivemile Creek bl. Prudes Cr. nr. Graysville	91.7	28.62	(I)16.45	10.00	(**)
02458148 Village Creek at 86th St. North at Roebuck	4.10	12.56	(I)10.98	5.00	M
02458200 Village Cr. at Apalachee St. at Birmingham	15.6	20.22	10.55	10.00	M
02458300 Village Creek at at 24th St. at Birmingham	26.0	14.15	11.65	12.00	M
02458450 Village Creek at Ave. W. at Ensley	33.5	13.70	11.54	10.00	H
02458502 Village Creek near Pratt City	36.7	17.67	15.90	15.00	(**)
02458600 Village Creek near Docena	52.2	11.99	12.42	8.00	H
02461130 Valley Creek at Center St. at Birmingham	7.00	12.60	(I)12.06	7.00	H
02461500 Valley Creek near Bessemer	52.5	18.6	13.60	10.50	M
02461640 Valley Creek below Bessemer	61.4	13.24	6.51	7.00	H
02462000 Valley Creek near Oak Grove	148	33.98	28.86	25.00	M(*)
02462500 Black Warrior River at Bankhead LD	3,981	255.60		N/A	
02462951 Black Warrior River at Holt LD	4,219	190.19		N/A	
02464000 North River near Samantha	223	35.08	34.16	25.00	M
02464146 Turkey Creek near Tuscaloosa	6.16	11.98	4.35	5.00	H
02464360 Binion Creek near Samantha	57.2	15.19	11.22	12.00	H
02465000 Black Warrior River at Oliver LD	4,820	151.05			

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
02465292 Cribbs Mill at WW Plt. at Tuscaloosa	10.7	11.97	6.27	5.00	
02465493 Elliotts Creek at Moundville	32.3	8.80	8.21	8.00	H
02466030 Black Warrior River at Selden LD	5,810	108.87			As Needed
02467000 Tombigbee River at Demopolis LD	15,385	93.03			As Needed
02467500 Sucarnoochee River at Livingston	607	33.47	32.88	20.00	L
02469761 Tombigbee River at Coffeeville LD	18,417	53.4			
02469800 Satilpa Creek near Coffeeville	164	18.37	16.04	16.00	H
02470072 Bassett Creek near Thomasville	10.5	10.33	9.79	10.00	H
02471001 Chickasaw Creek near Kushla	125	24.00	22.14	23.00	M
02471078 Fowl River near Laurendine	16.5	12.56	10.13	11.00	H
02479560 Escatawpa River near Agricola, MS	562	22.81	22.72	22.80	L
02479945 Big Creek near Wilmer	31.5	14.21	12.61	13.00	M
02479980 Crooked Creek near Fairview	8.08	8.59	3.14	4.00	(**)
02480002 Hamilton Creek near Semmes	8.22	8.70	6.98	7.00	H(*)
03573182 Scarham Creek near McVille	50.0	13.48	10.03	6.00	H
03574500 Paint Rock River near Woodville	320	24.40	22.46	20.00	L
03575100 Flint River near Brownsboro	375	23.03	19.74	20.00	L
03575500 Tennessee River at Whitesburg	25,610	31.40			
0357526200 Big Cove Creek near Huntsville	4.89	12.20	12.18		
0357568650 Aldridge Creek at Toney Drive	1.41	9.40	3.19		
0357568980 Aldridge Creek at Sherwood Drive	6.97	14.55	4.27		
03575700 Aldridge Creek near Farley	13.0	13.78	7.98		
03575830 Indian Creek near Madison	49.0	12.70	11.49	8.00	M
0357586650 Fagan Creek at Huntsville	3.44	5.50	--		
0357587090 West Fork Pinhook Creek at Huntsville	2.28	9.18	--		
0357587140 East Fork Pinhook Creek at Huntsville	2.52	8.19	--		
0357587400 Pinhook Creek at Mastin Lake Road	8.50	8.89	--		
0357587728 Dallas Branch at Huntsville	2.99	5.20	1.70		

Active Continuous Record Stations

[*, special bridge/traffic considerations; ** bridge/flag indirect measurement; H, high; M, moderate; L low]

Station Number and Name	Drainage Area (sq. mi.)	Observed Max Stage (feet)	Max. Stage Meas.	Meas. above Stage	Priority
03575890 Pinhook Creek at Huntsville	22.6	16.48	(I)16.50		
0357591500 Broglan Branch Oakwood Ave. at Huntsville	1.47	12.90	--		
03575933 Broglan Branch at Clinton Ave. nr Huntsville	8.93	10.15	--		
03575950 Huntsville Spring Branch near Huntsville	41.8	20.14	11.24		
03575980 McDonald Creek near Huntsville	9.64	14.21	--		
03576250 Limestone Creek near Athens	119	17.48	14.03	8.00	H(*)
03586500 Big Nance Creek at Courtland	166	24.97	24.50	16.00	M
03589500 Tennessee River at Florence	30,810				

Note: Huntsville sites shown above are all primarily flood hydrograph sites with recording gages and crest-stage gages utilized in making indirect measurements on several peaks during most year.

ALABAMA WSC FLOOD PLAN - Appendix 4

SPECIAL PROBLEMS IN CONVENTIONAL CURRENT-METER MEASUREMENTS:

MEASUREMENT OF DEEP, SWIFT STREAMS

Measurement of deep swift streams presents no serious problems when a sounding weight of sufficient size is available and there is not an excessive amount of drift and/or ice flowing in the stream. However, there are times when it is necessary to alter our normal stream gaging procedures when gaging deep swift streams. The six most common circumstances are listed below:

1. Able to sound but weight and meter drift downstream.
2. Cannot sound; standard cross section available.
3. Cannot sound; standard cross section not available.
4. Cannot put meter in water.
5. Measurements during rapidly changing stage.
6. Series of measurements needed during a peak of short duration.

The procedures outlined for items 2, 3, and 4 above assume that there is a stable cross section. At stations with unstable channels it is necessary to decide on a procedure based on the situation at each station.

1. The first item, when measuring where soundings can be obtained but the weight and meter drift downstream, is adequately covered on pages 159-170 of Volume I of WSP 2175. The use of tags on the sounding line and stay lines is also discussed.

2. The procedure to follow when measuring where a standard cross section is available, but where it is impossible to make soundings, is:

A. Determine the depths from the standard cross section.

B. Measure the velocity at the 0.2 depth.

C. Determine coefficients to adjust the 0.2 depth velocities to the mean velocity in the vertical on the basis of previous measurements made by the 0.2 and 0.8 depth method.

D. Compute the measurement in the normal manner using the depths from the standard cross section and the velocities as adjusted in step C.

3. The procedure to follow when measuring where it is impossible to obtain soundings and a standard cross section is not available is:

A. Reference the water-surface elevation before and after the measurement to an RP on a bridge or a driven stake or tree along the water's edge.

B. Estimate the depths and observe the velocity at 0.2 of the estimated depth. The meter should be at least 2.0 feet below the water surface. The actual depth the meter was placed below the water surface should be recorded in the notes. If an estimate of the depth is impossible just place the meter 2.0 feet below the water surface and observe the velocity there.

C. Make a complete measurement, including some vertical velocity curves, at a lower stage.

D. Use the complete measurement and difference in stage between the two measurements to determine the cross section of the first measurement.

E. Use vertical velocity curves to determine coefficients to adjust the velocities observed in step B to mean velocity.

F. Compute the measurement in the normal manner using the depths from step D and the velocities from step E.

4. The procedure to follow when measuring where it is impossible to keep the weight and meter in the water is:

A. Repeat step A in procedure 3.

B. Measure surface velocities by timing floating drift.

C. Repeat steps C, D, E, and F in procedure 3.

It should be remembered that just after the crest the amount of floating drift or ice will usually be greatly reduced and it may be possible to obtain velocity observations with a current meter. If this condition appears probable it would be best to omit the float measurement and make a current-meter measurement at a slightly lower stage.

5. During periods of rapidly changing stage, measurements should be made as quickly as possible to keep the change in stage to a minimum. The procedure to follow to speed up a measurement is:

A. Use the 0.6 depth method. The 0.2 depth method or the subsurface method could be used if placing the meter at the 0.6 depth creates vertical angles and thus wastes time because air and water depth corrections have to be made.

B. Reduce the velocity observation time to about 20-30 seconds.

C. Reduce the number of sections taken to about 15-18.

By incorporating all three of the above practices a measurement very often can be made in 15 to 20 minutes. If the subsurface method for observing velocities is used, then some vertical velocity curves will be needed later to establish coefficients to convert observed velocity to mean velocity.

Anderson (1961) has shown that the discharge measurement error for a 45-second period of observation, the 0.2 depth and 0.8 depth method of velocity observation, and depth and velocity observed at 25 locations is 2.2 percent. This means that two-thirds of the measurements made using this procedure would be in error by 2.2 percent or less. Using Anderson's data, the error for a 25-second period of observation, the 0.6 depth method of velocity observation, and depth and velocity observed at 16 locations is 4.2 percent. This slight increase in error due to using the short-cut methods suggested in procedure (5) is more than offset by the reduction in accuracy that would be caused by excessive change in stage during the time required to make a normal measurement.

6. The procedure to follow if a series of measurements is wanted during a peak of short duration is:

A. Take about 10 sections.

B. Take velocity observations at 0.6 depth.

C. Repeat velocity and depth observations at the 10 sections as often as possible throughout the period of the flood wave.

D. Develop stage-velocity and stage-depth curves for each of the 10 sections.

E. Compute the discharge corresponding to any stage from the curves thus defined.

ALABAMA WSC FLOOD PLAN - Appendix 5

EQUIPMENT REQUIREMENTS

Current meters - Price AA (2)
Headphones (2)
Stop watches (2)
Tagline reel (Lee-Au 500 ft.)
Protractor
Reel (B56 or B50)
Spare cable and connector for reel
Sounding weight (30c, 50c, 75c, 100c)
Spare hanger for reel
Weight pins (30c, 75c, 100c)
Tool box
Water-level measurement steel tape
Wading rod

Hip boots
Waders
Raincoat or rainsuit
Rainhat

Thermometer
Sample bottles

Life Jacket
Safety equipment for traffic

Flashlight
Camera
Stakes, nails, & flagging for high water marks
Hatchet
Hand level
Rope

Flood note measurement sheets
Pencils
Calculator
Airline and wetline correction table
Current meter rating tables
Copy of WSC flood plan
Field folders
TWRI Book3, Chapter A8

Bug Spray
Sun Screen
Cell Phone/SL Radio

FIELD INSTRUCTIONS FOR THE TRAFFIC CONTROL

1. **This handbook** applies to all rural and urban streets, roadways and non-interstate highways. Due to regulations established by the Alabama Department of Transportation and policies established by the U.S. Geological Survey, Alabama District, personnel of the U.S.G.S. are **not** to close lanes or shoulders along interstate highways. If conditions occur that require work on an interstate highway, then U.S.G.S. personnel should request assistance from local State Highway Patrol in establishing a traffic control plan for the immediate situation. In addition, the Alabama Department of Transportation has requested that their division office be notified whenever it is necessary for a lane to be blocked. Location and telephone numbers of the division offices are listed at the end of this plan.

2. It is **the responsibility of our employees** to take the proper precautions to insure the safety of the motorized and non-motorized public as well as the safety of themselves and fellow employees within and around temporary work zones. Traffic control devices (signs, cones, flaggers, etc.) shall be placed in positions where they will convey the information most effectively and accommodate highway design and alignment. At the end of this document are eight traffic control plans. On the first page of each plan is a list of the stations to which the plan applies. If, upon inspection of those lists, it is discovered that any station does not have a traffic control plan that applies to it, notify the district safety officer at once. All traffic control plans are in accordance with Part VI of the Manual on Uniform Traffic Control Devices (MUTCD). A copy of the 1988 edition of MUTCD, Revision 3 is available in both the Tuscaloosa and Montgomery offices.

3. **Traffic channelization** shall be done with 36-inch tall orange cones. The cones must have a 6-inch wide white reflective band 3 to 4 inches from the top and a 4 inch wide white reflec-

tive band located at least 2 inches below the 6-inch wide band. Cones should be kept clean to maximize their visibility.

4. **Approach warning signs** are required to alert traffic well in advance of any obstruction whenever any part of the roadway is obstructed or closed. Signs located at the work zone shall be 36-inch diamond shaped with retroreflective lettering on a retroreflective orange background, and placed at least 1 foot above the pavement. As a general rule, signs shall be located on the right side of the road, with the near edge of the sign 6 to 12 feet from the edge of the traveled way, or at least 2 feet outside the face of the curb. All signs should be mounted at right angles to the direction of traffic. Keep all instructions and channelization as simple as possible to avoid any confusion to the public.

5. **Hazard identification beacons** shall be a flashing or rotating yellow light. Flashing warning lights should be in operation any time work is being performed on bridges or along the roadside.

6. **Flaggers** should be used to control traffic whenever it becomes necessary for traffic in both directions to use the same lane for a limited amount of distance. This provision is made in order to alternate the one-way direction of traffic in the available lane, through the work zone. The number of flaggers depends on the length and type of obstructions. Since flaggers are responsible for the safety of motorists and workers, and make the greatest number of contacts with the public at the work site, a qualified person should be selected to perform the duties of flagging traffic. A flagger should possess the following qualifications;

a.) average intelligence

b.) good physical condition, good eyesight and good hearing

c.) mental alertness

d.) courteous but firm manner

e.) neat appearance

f.) sense of responsibility for the safety of the public and fellow workers.

Flaggers should be highly visible to the travelling public, so the use of orange clothing such as a vest or jacket is required. For night operations, these garments should be reflective. Flaggers should be located far enough away from the work zone so that the approaching traffic will have sufficient distance to reduce their speed before entering the work zone. This distance is related to the approach speed and physical conditions of the site, however a distance of 200 to 300 feet is desirable. Flaggers should stand either on the shoulder adjacent to the traffic they are controlling or in the barricaded lane. Under no circumstances should the flagger stand in the lane being used by moving traffic. In work zones where two flaggers are necessary, one flagger should be designated as the chief flagger, and both flaggers should have good visual contact or radio contact with one another. Precautions should be taken to avoid hand signals between flaggers because these could be misinterpreted by the motorist as signals for them. Signaling devices to be used by flaggers are STOP/SLOW sign paddles only, NO FLAGS. The paddles are the preferred devices since they convey the clearest instructions to the motorists. Flags should be used in emergency situations only.

Requirements and methods of signaling with a sign paddle are as follows:

(i) Sign paddles shall be a minimum of 18 inches wide with 6-inch lettering

(ii) To stop traffic, the flagger shall face the traffic and extend the stop sign paddle in a stationary position with arm extended horizontally away from the body. The free arm is raised with palm toward the approaching traffic.

(iii) When it is safe for traffic to proceed, the flagger shall face the traffic with the slow sign held in a stationary position with arm extended horizontally away from the body. The flagger motions the traffic ahead with the free hand.

(iv) When it is desired to alert or slow traffic, the flagger shall face the traffic with the slow sign paddle as before and may motion with free hand (palm down) up and down, indicating that the vehicle should slow down.

7. **Removal** of all traffic control devices should be done promptly after all work is completed. Clear the closed lane of any equipment or vehicles, and remove the traffic control devices from the bridge outward. **Stay alert! Be aware of traffic in both directions** while removing the traffic control devices.

Traffic Control Plan **TCP-1**

Applicable Stations:		Cones
02342933	South Fork Cowikee Creek near Batesville, AL	9
02362240	Little Double Bridges Creek near Enterprise, AL	8
02369800	Blackwater Creek near Bradley, AL	9
02372250	Patsaliga Creek near Brantley, AL	9
02377570	Styx River near Elsanor, AL	11
02378300	Magnolia River at U.S. 98 near Foley, AL	10
02378500	Fish River near Silver Hill, AL	9
02398300	Chattooga River above Gaylesville, AL	11
02398950	West Fork Little River at Desoto State Park near Fort Payne, AL	8
02404400	Choccolocco Creek at Jackson Shoals near lincoln, AL	13
02408540	Hatchet Creek below Rockford, AL	9
02412000	Tallapoosa River near Heflin, AL (1 mi. upstream at US 49; No truck measurements will be made at gage until new bridge is built.)	12
02413300	Little Tallapoosa River near Newell, AL	9
02414715	Tallapoosa River near New Site, AL	15
02418230	Sougahatchee Creek at County Road 188 near Loachapoka, AL	9
02422500	Mulberry Creek at jones, AL	10
02423630	Shades Creek near Greenwood, AL	8
02427250	Pine Barren Creek near Snow Hill, AL	10
02442500	Luxapallila Creek at Millport, AL	8
02446500	Sipsey River near Elrod, AL	10
02448500	Noxubee River near Geiger, AL (Lane closure for all bridge measurements)	12
02448900	Bodka Creek near Geiger, AL (Lane closure for all bridge measurements)	10
02450180	Mulberry Fork near Arkadelphia, AL	10
02450825	Clear Creek at New Hope Church near Poplar Spring, AL	8
02454055	Lost Creek above Parrish, AL	8
02455900	Locust Fork at Warrior, AL	
02456500	Locust Fork at Sayre, AL	11
02456980	Fivemile Creek at Lawson Road near Tarrant City, AL	8
02457595	Fivemile Creek near Republic, AL	8
02467500	Sucarnoochee River at Livingston, AL	14
02479560	Escatawpa River near Agricola, MS	10
02479945	Big Creek at County Road 63 near Wilmer, AL	7
03573182	Scarham Creek near McVille, AL	
03586500	Big Nance Creek at Courtland, AL	10

Traffic Control Plan **TCP-1**

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light. If the truck can not be parked at the end of the bridge, a "WORKERS AHEAD" sign should be placed 500 feet from each end of the bridge.

For truck measurements or bridge-board measurements that will take longer than 60 minutes:

*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.

Sign Definitions:

W21-1A	"WORKERS AHEAD" (Symbolic)
W5-3	"ONE LANE BRIDGE"
W20-7A	"FLAGGER AHEAD" (Symbolic)

Cone Size: 36 inch with reflective collars

REQUIRED EQUIPMENT

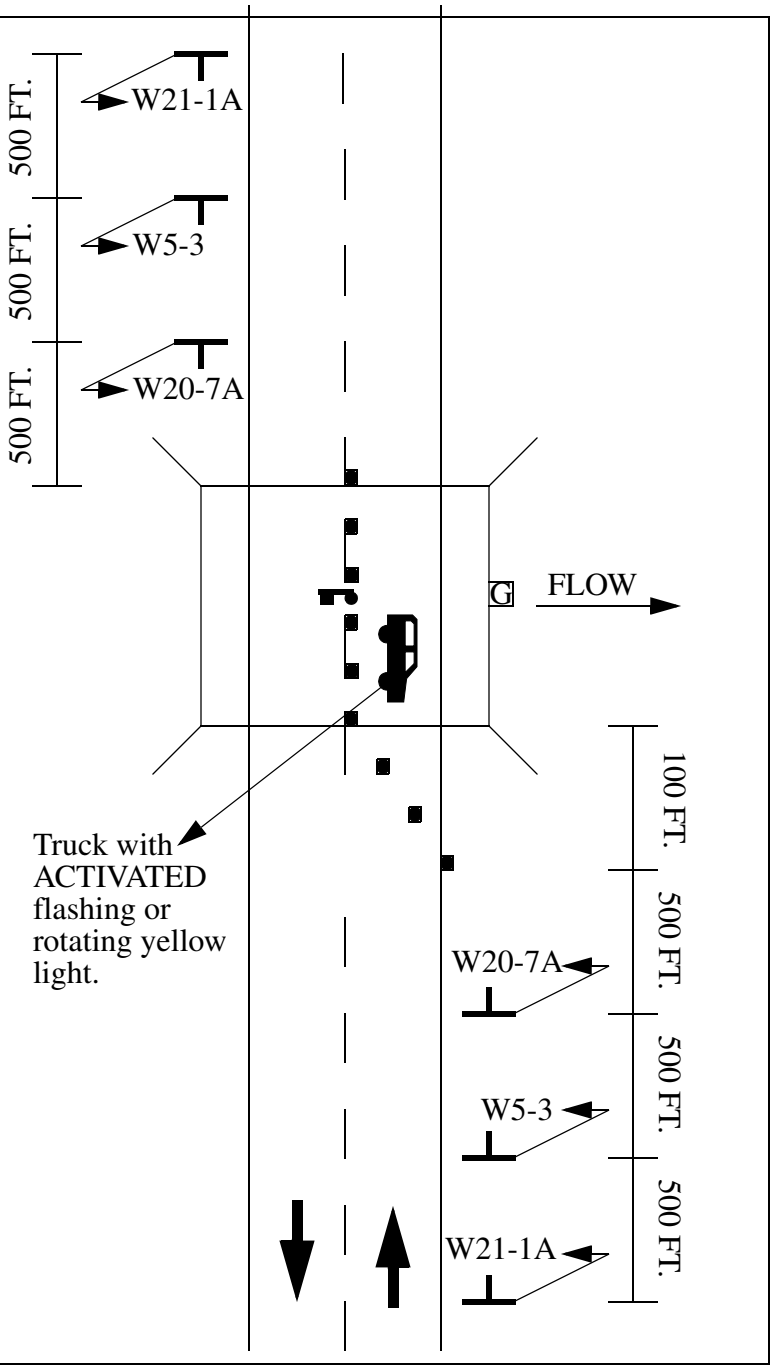
Signs with Stands:

2 x W21-1A 2 x W5-3 2 x W20-7A	} 6 Total

Cones:	
Taper:	6 @ 20 FT for 100 FT
Bridge:	Rest @ 100 FT interval
Total:	10 Cones
Flaggers:	1
Stop/Slow Paddles:	1
Radios:	0

LEGEND

- Cone
- Flagger
- Sign



Traffic Control Plan **TCP-2**

Applicable Stations:

02342500	Uchee Creek near Fort Mitchell, AL
02361000	Choctawhatchee River near Newton, AL
02371500	Conecuh River at Brantley, AL
02373000	Sepulga River near McKenzie, AL
02374700	Murder Creek at Brewton, AL
02374745	Burnt Corn Creek near Brewton, AL
02376115	Elevenmile Creek near Pensacola, FL
02411930	Tallapoosa River below Tallapoosa, GA
02413210	Little Tallapoosa River below Bowden, GA
02456000	Turkey Creek at Morris, AL
02461130	Valley Creek at Center Street at Birmingham, AL
02465493	Elliots Creek near Moundville, AL
02469800	Satilpa Creek near Coffeeville, AL

Station Number	Total Number of Cones	Taper Spacing and Number of Cones	Bridge Spacing and Number of Cones
02342500	9	4 @ 50 FT	5 @ 100 FT
02361000	10	4 @ 50 FT	6 @ 100 FT
02371500	13	4 @ 50 FT	9 @ 100 FT
02373000	11	4 @ 50 FT	7 @ 100 FT
02374700	9	4 @ 50 FT	5 @ 100 FT
02374745	8	4 @ 50 FT	4 @ 100 FT
02376115	8	4 @ 50 FT	4 @ 100 FT
02411930	9	4 @ 50 FT	5 @ 100 FT
02413210	8	4 @ 50 FT	4 @ 100 FT
02456000			
02461130	6	4 @ 50 FT	2 @ 100 FT
02465493	8	4 @ 50 FT	4 @ 100 FT
02469800	10	4 @ 50 FT	6 @ 100 FT

Traffic Control Plan **TCP-2**

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light.

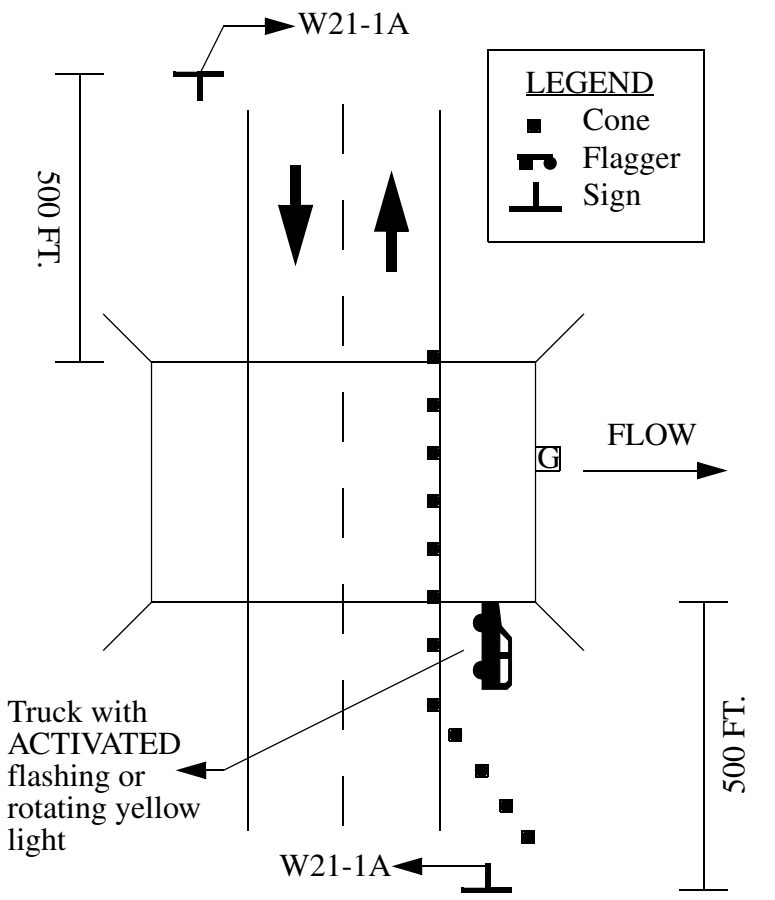
For truck measurements or bridge-board measurements that will take longer than 60 minutes:

REQUIRED EQUIPMENT
Signs with Stands:
2 x W21-1A "WORKERS AHEAD" (Symbolic)

Cones: 36 inch with reflective collars

See attached table for taper length, number of cones, and cone spacing.

Flaggers:	0
Stop/Slow Paddles:	0
Radios:	0



*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.

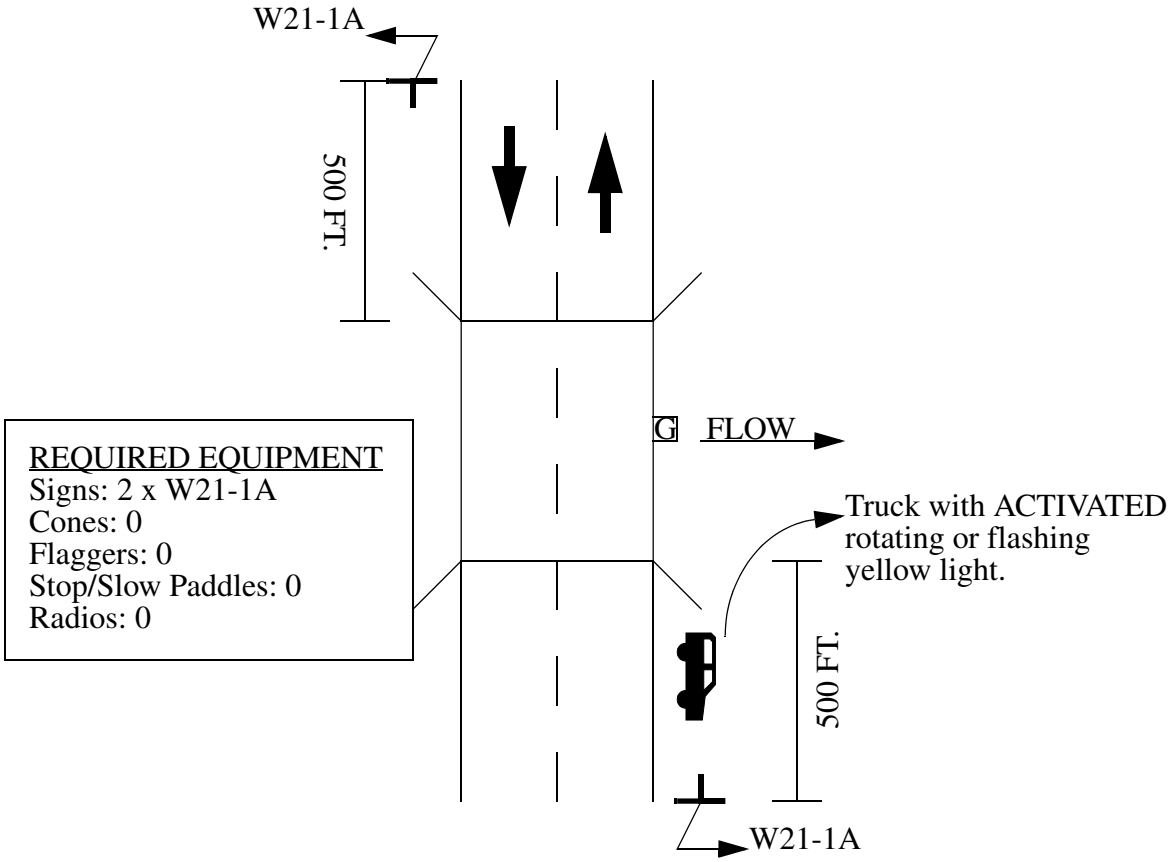
Traffic Control Plan **TCP-3**

Applicable Stations: Cones

02364000	Pea River at Elba, AL13
02374250	Conecuh River at Brewton, AL (Lane closure for all bridge measurements)17
02374500	Murder Creek at Evergreen, AL (Lane closure for all bridge measurements)11
02398037	Chattooga River at Chattoogaville, GA9
02399200	Little River near Blue Pond, AL10
02400100	Terrapin Creek at Ellisville, AL (Lane closure for all bridge measurements)14
02401000	Big Wills Creek near Reece City, AL (Lane closure for all bridge measurements) 10
02405500	Kelly Creek near Vincent, AL12
02406500	Talladega Creek at Alpine, AL (Lane closure for all bridge measurements)13
02414500	Tallapoosa River at Wadley, AL (Lane closure for all bridge measurements)15
02419000	Uphapee Creek near Tuskegee, AL16
02423380	Cahaba River near Mountain Brook, AL9
02423398	Little Cahaba River near Leeds, AL (Lane closure for all bridge measurements)8
02423500	Cahaba River near Acton, AL11
02424590	Cahaba River near Suttle, AL (Lane closure for all bridge measurements)11
02438000	Buttahatchee River below Hamilton, AL10
02450250	Sipsey Fork near Grayson, AL10
02458200	Village Creek at Apalachee Street in Birmingham, AL
02461500	Valley Creek near Bessemer, AL9
02462000	Valley Creek near Oak Grove, AL (Lane closure for all bridge measurements)11
02464000	North River near Samantha, AL (Lane closure for all bridge measurements)9
02480002	Hamilton Creek at Snow Road near Semmes, AL (Lane closure for all bridge 8 measurements)

Traffic Control Plan **TCP-3**

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge):



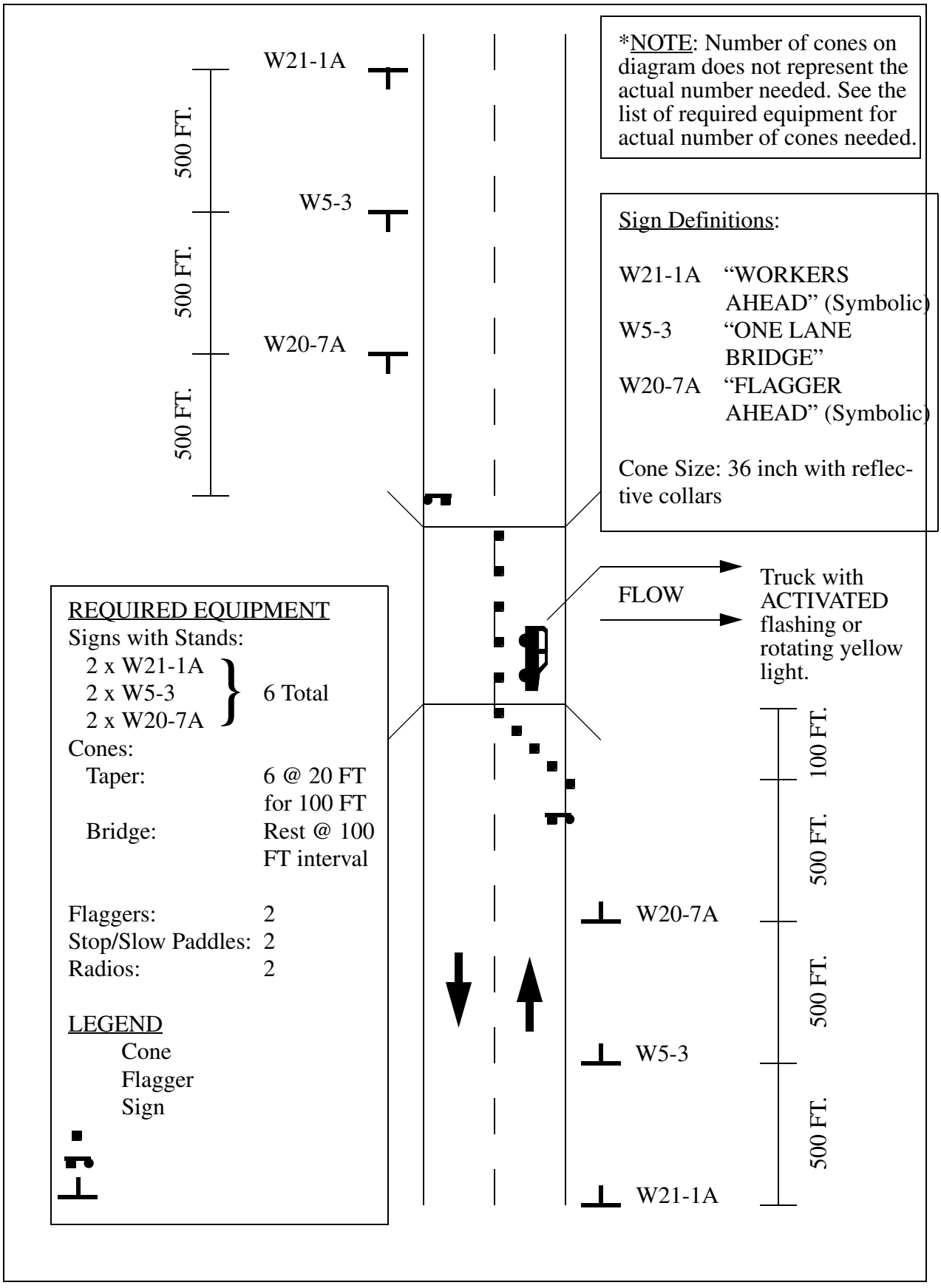
Sign Definitions:

W21-1A "WORKERS AHEAD" (Symbolic)
W5-3 "ONE LANE BRIDGE"
W20-7A "FLAGGER AHEAD" (Symbolic)

Cone Size: 36 inch with reflective collars

LEGEND
- Cone
- Flagger
- Sign

For all truck measurements or bridge-board measurements that will take longer than 60 minutes:



Traffic Control Plan TCP-4

Applicable Stations:		Cones
02372422	Conecuh River at River Falls, AL	12
02401390	Big Canoe Creek at Ashville, AL	7
02419890	Tallapoosa River near Montgomery, AL	15
02421000	Catoma Creek near Montgomery, AL	12
02425000	Cahaba River near Marion Junction, AL	10
02458600	Village Creek near Docena, AL	9
02470072	Bassett Creek near Thomasville, AL	6
03574500	Paint Rock River near Woodville, AL	10

Traffic Control Plan **TCP-4**

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light.

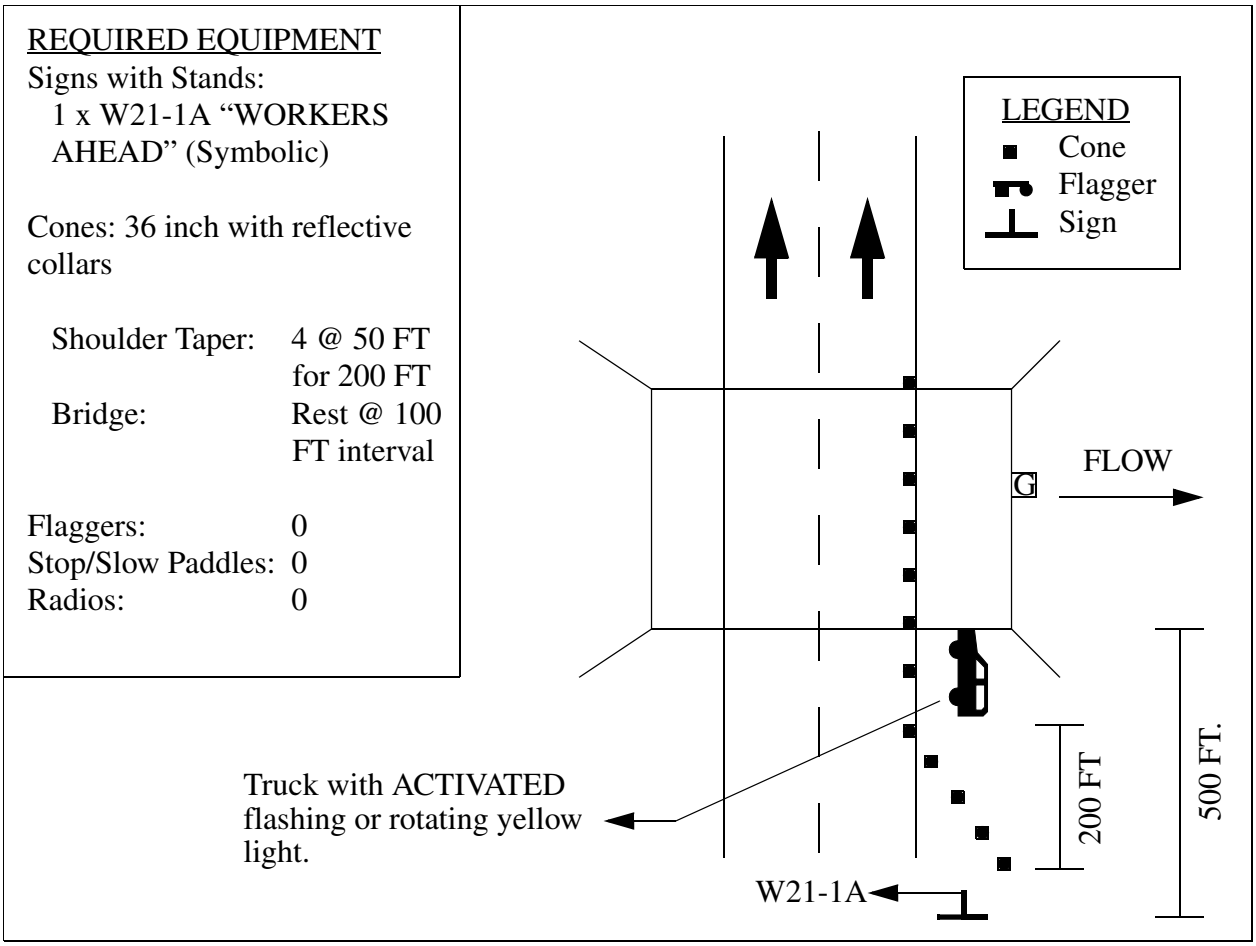
For truck measurements or bridge-board measurements that will take longer than 60 minutes:

REQUIRED EQUIPMENT

Signs with Stands:
1 x W21-1A "WORKERS AHEAD" (Symbolic)

Cones: 36 inch with reflective collars

Shoulder Taper:	4 @ 50 FT for 200 FT
Bridge:	Rest @ 100 FT interval
Flaggers:	0
Stop/Slow Paddles:	0
Radios:	0



*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.

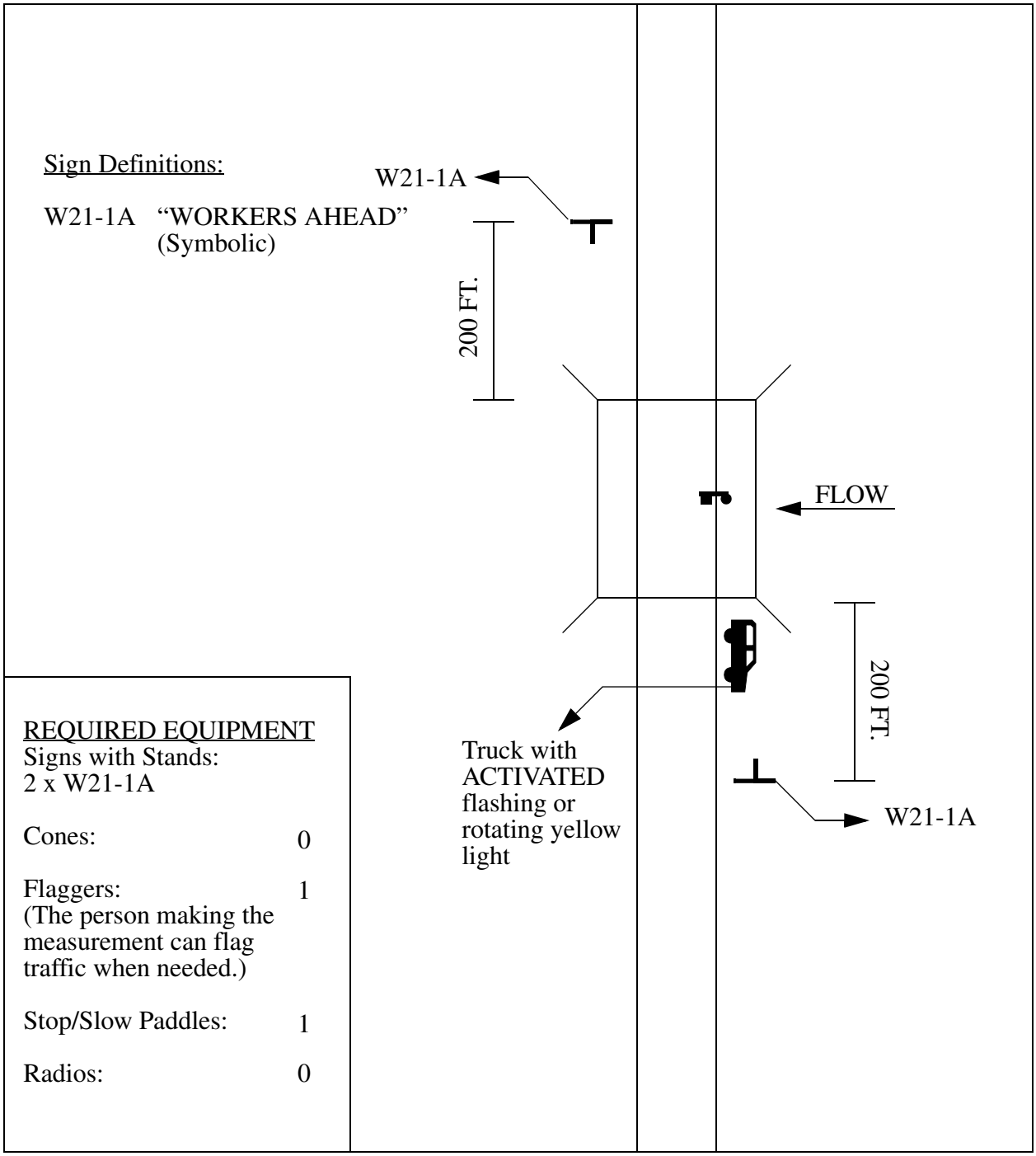
Traffic Control Plan **TCP-5**

Applicable Stations:

02376500	Perdido River at Barrineau Park, FL
02456998	Barton Branch near Tarrant, AL
02464360	Binion Creek near Samantha, AL

Traffic Control Plan **TCP-5**

For all bridge measurements:

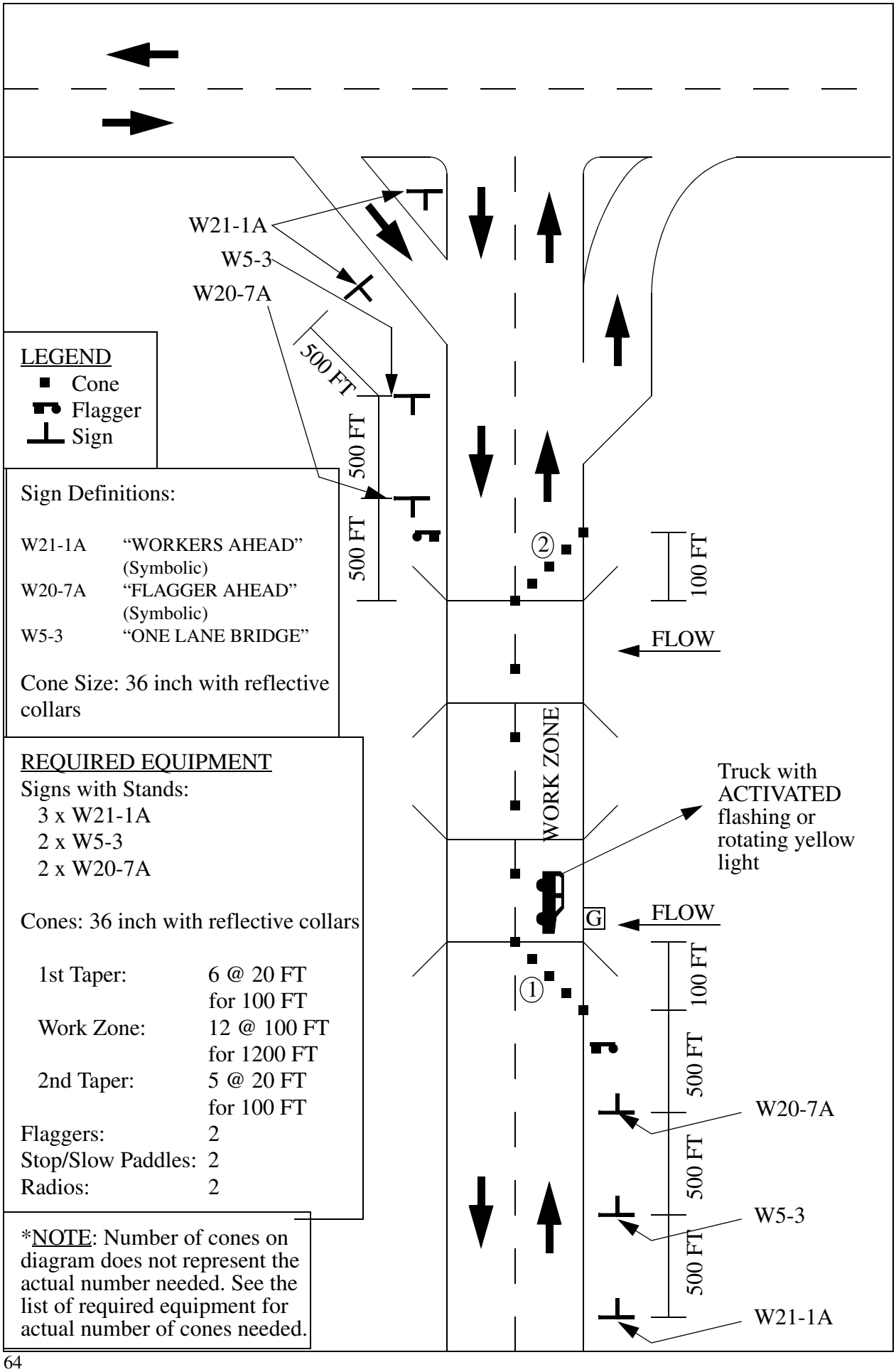


Traffic Control Plan **TCP-6**

Applicable Stations:		Cones
02471001	Chickasaw Creek near Kushla, AL	23

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light.

For truck measurements or bridge-board measurements that will take longer than 60 minutes, see the diagram on the following page.


W21-1A
W5-3
W20-7A
500 FT
500 FT
500 FT
LEGEND
Cone
Flagger
Sign
Sign Definitions:
W21-1A "WORKERS AHEAD" (Symbolic)
W20-7A "FLAGGER AHEAD" (Symbolic)
W5-3 "ONE LANE BRIDGE"
Cone Size: 36 inch with reflective collars
REQUIRED EQUIPMENT
Signs with Stands:
3 x W21-1A
2 x W5-3
2 x W20-7A
Cones: 36 inch with reflective collars
1st Taper: 6 @ 20 FT for 100 FT
Work Zone: 12 @ 100 FT for 1200 FT
2nd Taper: 5 @ 20 FT for 100 FT
Flaggers: 2
Stop/Slow Paddles: 2
Radios: 2
*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.
100 FT
FLOW
WORK ZONE
Truck with ACTIVATED flashing or rotating yellow light
G
FLOW
100 FT
500 FT
W20-7A
500 FT
W5-3
500 FT
W21-1A

Traffic Control Plan **TCP-7**

Applicable Stations:		Number of Cones
02363000	Pea River near Ariton, AL	11
02423130	Cahaba River at Trussville, AL	8
02424000	Cahaba River at Centreville, AL	11
02458300	Village Creek at 24th Street at Birmingham, AL	7
02458450	Village Creek at Avenue W at Ensley, AL	7

Traffic Control Plan **TCP-7**

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light.

For truck measurements or bridge-board measurements that will take longer than 60 minutes:

*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.

Sign Definitions:

W21-1A	"WORKERS AHEAD" (Symbolic)
W5-3	"ONE LANE BRIDGE"
W20-7A	"FLAGGER AHEAD" (Symbolic)

Cone Size: 36 inch with reflective collars

REQUIRED EQUIPMENT

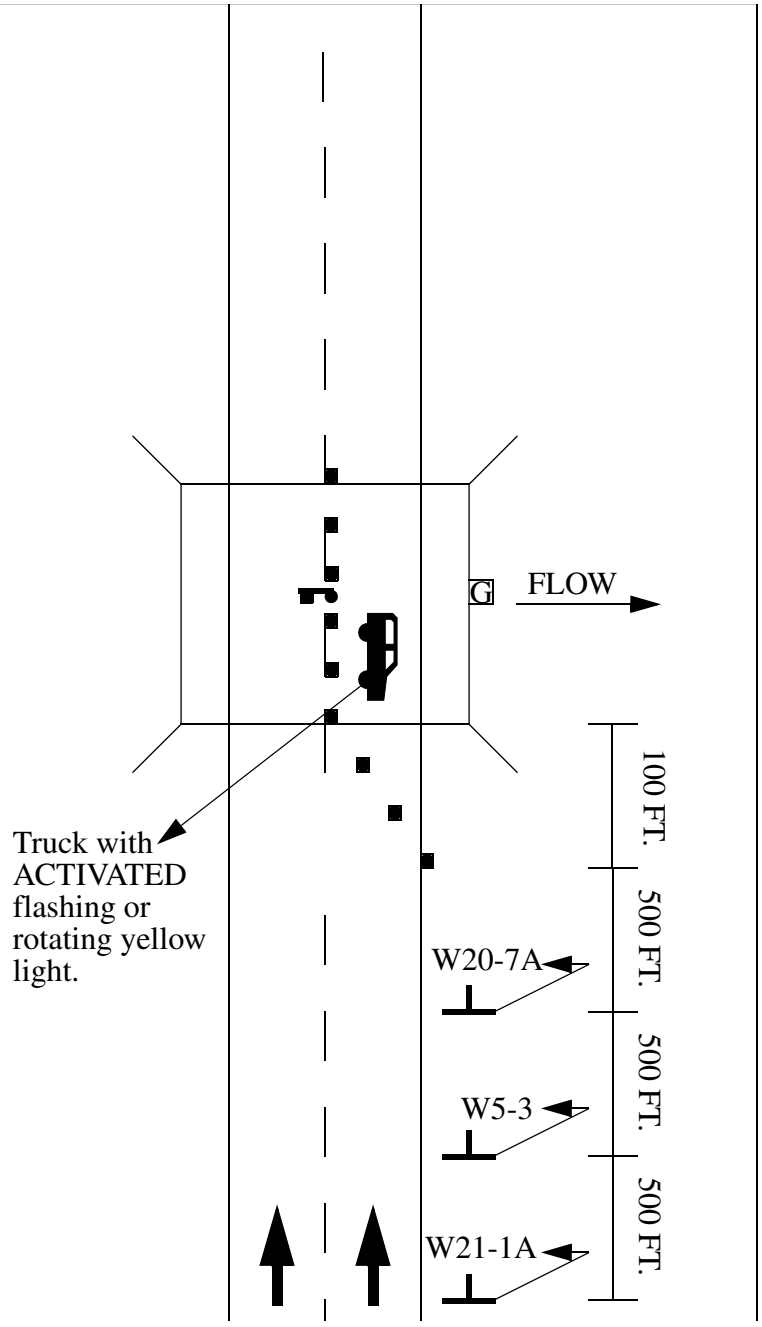
Signs with Stands:
- 1 x W21-1A
- 1 x W5-3
- 1 x W20-7A

} 6 Total

Cones:

Taper:	6 @ 20 FT for 100 FT
Bridge:	Rest @ 100 FT interval
Flaggers:	1
Stop/Slow Paddles:	1
Radios:	0

LEGEND
- ■ Cone
- Flagger
- Sign

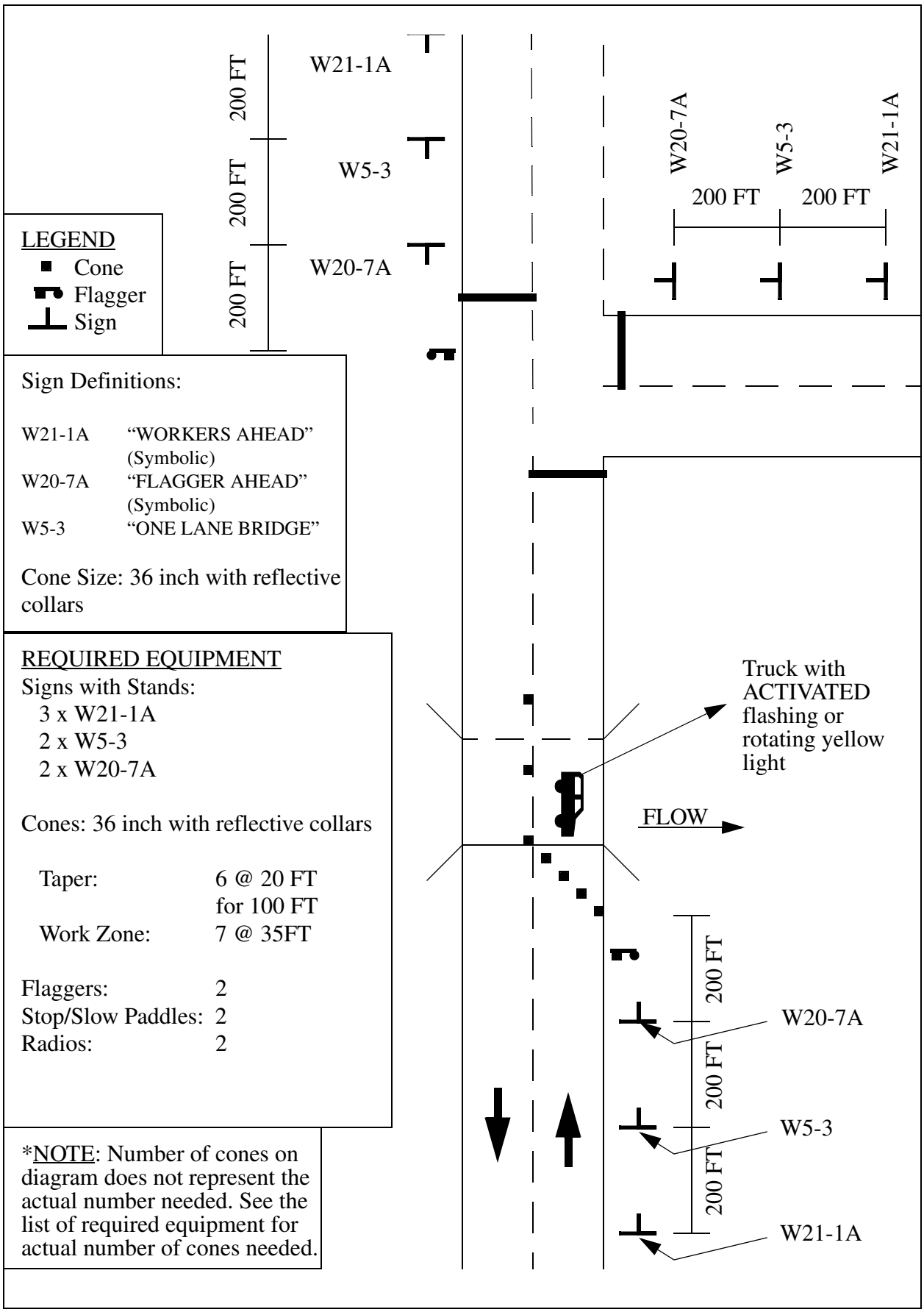


Traffic Control Plan **TCP-8**

Applicable Stations:		Cones
0242354750	Cahaba Valley Creek at Cross Creek Road at Pelham, AL	13

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge), no cones or signs are required as long as the truck is parked on the shoulder with an ACTIVATED rotating or flashing yellow light.

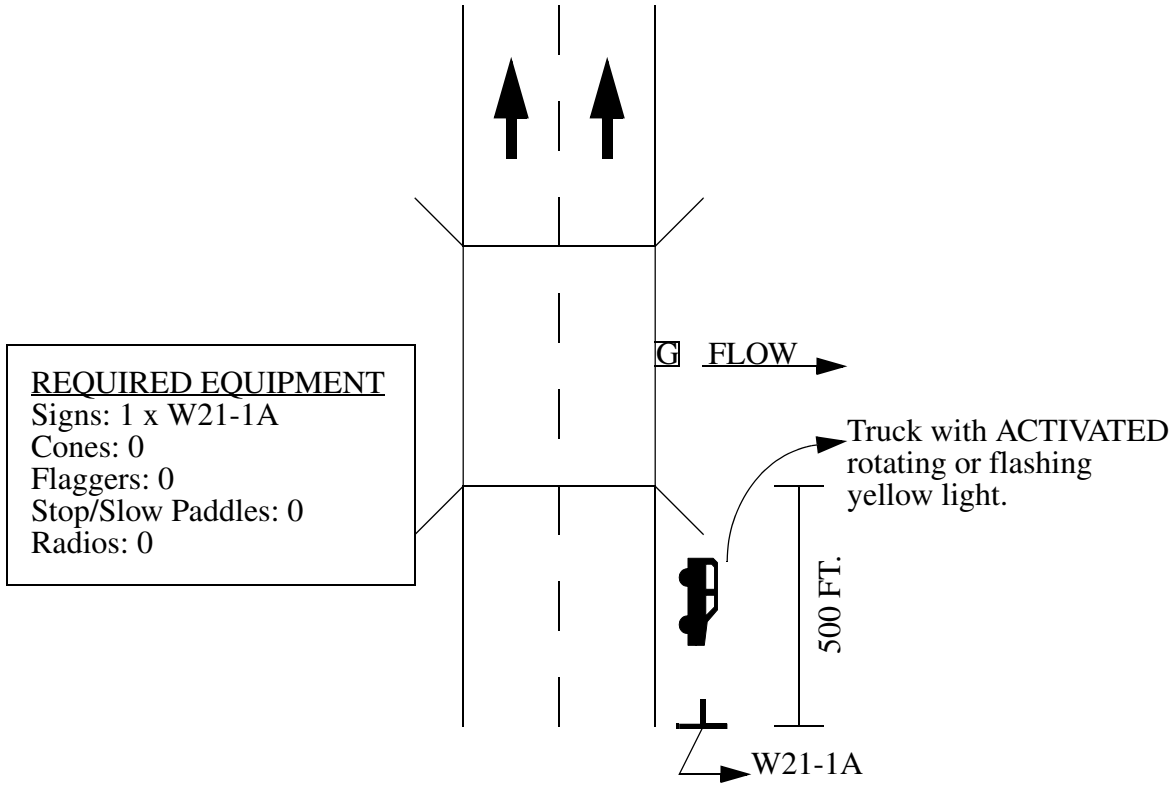
For truck measurements or bridge-board measurements that will take longer than 60 minutes, see the diagram on the following page.


W21-1A
W5-3
W20-7A
200 FT
200 FT
200 FT
W20-7A
W5-3
W21-1A
200 FT
200 FT
LEGEND
Cone
Flagger
Sign
Sign Definitions:
W21-1A "WORKERS AHEAD" (Symbolic)
W20-7A "FLAGGER AHEAD" (Symbolic)
W5-3 "ONE LANE BRIDGE"
Cone Size: 36 inch with reflective collars
REQUIRED EQUIPMENT
Signs with Stands:
3 x W21-1A
2 x W5-3
2 x W20-7A
Cones: 36 inch with reflective collars
Taper: 6 @ 20 FT for 100 FT
Work Zone: 7 @ 35FT
Flaggers: 2
Stop/Slow Paddles: 2
Radios: 2
*NOTE: Number of cones on diagram does not represent the actual number needed. See the list of required equipment for actual number of cones needed.
Truck with ACTIVATED flashing or rotating yellow light
FLOW
200 FT
200 FT
200 FT
W20-7A
W5-3
W21-1A

Traffic Control Plan **TCP-9**

Applicable Stations:		Cones
03575830	Indian Creek near Madison, AL	10
03576250	Limestone Creek near Athens, AL	10

For bridge-board measurements and routine gage inspections (Less than 60 minutes on bridge):



Sign Definitions:

W21-1A "WORKERS AHEAD" (Symbolic)
W5-3 "ONE LANE BRIDGE"
W20-7A "FLAGGER AHEAD" (Symbolic)

Cone Size: 36 inch with reflective collars

LEGEND
- Cone
- Flagger
- Sign

For all truck measurements or bridge-board measurements that will take longer than 60 minutes: